Aspects of the urban development of Kuwait

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ABSTRACT

The associations between urbanization and economic development are first reviewed for the developing world. Special attributes of Middle East urbanization are then considered and levels of urbanization compared in most Middle Eastern nations. Next, special factors relating to Kuwait's urbanization are discussed. Part One concludes with a study of Kuwait's post-War economic expansion.

Part Two deals with the consequences of Kuwait's rapid economic growth. First, population increase by immigration is analysed, followed by a study of natural increase. One important result of this demographic growth was the physical expansion of all Kuwait's urban areas, particularly the capital.

Further analysis of the size and spacing of urban centres in Kuwait reveals that a primate distribution prevails. Established theories are tested against these observations and found partially deficient. A Q-Mode Factor Analysis routine is employed to describe the dimensions of social and economic variation within all Kuwait's urban centres. Broadly, a duality between Kuwaitis and non-Kuwaitis, described earlier, is confirmed statistically. In addition, non-Kuwaitis are further subdivided into those of higher and lower socio-economic status.

Results of the field survey of all retail and service trade facilities in the State are presented. Their distribution, it is shown, closely corresponds to Western-derived predictive models. The use of these facilities, however, differs widely from the better-known examples in Europe and North America. Significant differences are discerned between the shopping behaviour of various national groups in Kuwait.

The study concludes by pointing out contrasts between Western and non-Western cities in genesis, structure, and functional differentiation.

Aspects of the Urban Development of Kuwait

by

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STATEMENT

None of the material offered here has been previously submitted by the candidate for a degree in this or any other University. The work represents the candidate's original research except where acknowledged by reference.

MEMORANDUM

In this work the term "Persian Gulf" is used to refer to the inland sea separating Persia from Arabia. It should be pointed out that amongst the inhabitants of the Arabian shore and in the Arab World as a whole the term "Arabian Gulf" (Khalij al-Arabi) is in common use. The use of "Persian Gulf" here conforms to accepted usage in the United Kingdom and implies no political bias whatsoever.

PREFACE

I owe my greatest debt to the Government and people of Kuwait who allowed me to live and work in their country at a difficult juncture in the Middle East's political history. Officials in every Government establishment gave me cordial assistance at every stage of my enquiry, but I must mention several individuals by name because of their unstinting co-operation.

First and foremost, the late Dr. Saba G. Shiber was my principal mentor and friend when I worked with him in the Planning Board, Kuwait. His book, "The Kuwait Urbanization", and his fund of ideas, both published and unpublished, warrant close attention by any student of urban development. It was with his assistance that I began the task of examining Kuwait's urbanization - a field which he himself had pioneered. His untimely death deprived us of one of the most productive minds in the contemporary Arab world.

Secondly, I gratefully acknowledge the assistance of many, many officials in the Municipality, amongst them Mr. Hamid Shwaib, Director of Technical Affairs, and Mr. Abdulaziz al-Hamdan, Director of the Master Planning Department. Their staff - particularly Messrs. Fouad Haddad,

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At Ahmadi, the Kuwait Oil Company accommodated me for a spell during my research, at the same time providing, through their Department of Local Relations, much relevant statistical material. In addition, they kindly assisted with the transport of some of this statistical material to England.

Finally, I am indebted to the ladies of many nationalities in Kuwait who answered my shopping questionnaires

at home, in clubs, and at public meetings, thus facilitating the detailed study of consumer movements in the State.

This work was supervised throughout by Professor W.B. Fisher to whom I am grateful for his oversight of the project, and for the use of his Department's facilities. Finance was provided under the "Hayter Scheme" of the Department of Education & Science made available through the Middle East Centre here in Durham. In addition, I am most grateful to the Master and Governing Body of University College, Durham who, through the Skene Bursary Fund, provided extra finance for me to visit the Trucial States and Qatar.

I will conclude by thanking my many friends and confidants in Kuwait and those in Durham, especially my wife, who alone are aware of the size of the debt which I owe to them.

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INTRODUCTION

Urbanization and economic development are among the most popular topics dealt with in the contemporary literature of the Social Sciences. A growing awareness of the complementary nature of the developed and developing worlds has stimulated numerous specialist studies which, from various disciplinary standpoints, investigate the conditions and causes of differential levels of national prosperity. Since an increase in prosperity seems almost inextricably linked with industrialization and finally urban growth, the evolution of urban centres is a necessary corollary of many of these studies of economic development. Further, the accelerating pace of world urbanization which at mid-century resulted in the concentration of 21 percent of the world population in localities of 20,000 inhabitants and over, has attracted the attention of scores of workers eager to describe and interpret this world-wide phenomenon. Such a close scrutiny of the developing world from both the practical and theoretical viewpoints has resulted in two major repercussions :

1. As detailed studies of specific topics and regions become available in increasing numbers it is clear that many of the general theories evolved in the developed world are of little relevance in the context of the developing countries.

2. Despite attempts to synchronize development phases - for example, by equating political, economic, and demographic conditions in 19th century Europe with those prevailing in the developing countries today - comparison shows that more than historical time is responsible for the differences between the stages of evolution attained in the contemporary developed and developing worlds.

An important stage in the study of the links between both worlds has been reached. This incompatibility of the two worlds on both practical and theoretical grounds is leading to a whole new range of studies dealing with the developing world as an independent unit rather than as a deviant from the more conventional European or North American development models. Many of the processes affecting the poorer countries of the world today can be justly dubbed unique; few direct parallels can be drawn with the richer countries. At the same time, some theoretical studies have spanned both the rich and the poor nations of the world indicating that certain concepts still have universal applicability.

At present, one of the tasks facing specialists of every genre involved in some way with development studies is to begin the lengthy task of testing established theories against the universe of case studies available; to distinguish theoretical statements of general validity from those of more

parochial application; and to evolve new theories to fill the vacuum created by the incompatibility of studies relating simultaneously to both developed and developing worlds. It is in this context that we must approach the study of the urban development of Kuwait.

PREVIOUS STUDIES

Kuwait has been the subject of many articles and also several books, e.g. those of Dickson (1956), Shiber (1964), I.B.R.D. (1965), Freeth (1956), Abu Hakima (1964), Hewins (1963), Lockhart (1947), Shamma (1959), Muller (1963), Wegner (1958), and Candolle (1958). Most of the emphasis in these publications is placed on Kuwait's wealth and the speed with which the traditional economy and society have been swept away by the modern oil industry. These two themes are inescapable in any consideration of Kuwait, but they emphasize Kuwait's exceptionalism and peculiarities while missing many general theoretical points of at least equal significance. Kuwait is certainly an anomalous development - a small state, apparently barren, yet with one of the highest per capita incomes in the world. But in recent years, Kuwait's place in the overall development of the Middle East area has been accepted while yet smaller desert Shaikhdoms have been discovered with apparently much greater potential wealth.

Rapid economic expansion is thus becoming a less exceptional world phenomenon (e.g. Japan, Hong Kong, Brazil, Venezuela, Libya), although most of the developing world still displays extremely low rates of growth of the per capita Gross National Product. Instead of pointing to the few economic "boom" states of the developing world as exceptions of little general significance, it is suggested that more studies in depth are required to bring out not only the exceptional factors but also those aspects of their growth of wider theoretical and practical significance. Kuwait provides a stringent testing ground for many general theories. This study aims to examine as many as possible, accepting some and suggesting modifications to others.

In the present work the topic is approached systematically in eleven Chapters divided into two major Parts. The first Part deals with general factors in the Kuwait environment as a whole while the second Part considers specific aspects of Kuwait's development in much greater detail. Chapter 1 deals with the relationships between economic development and urbanization on a world scale and, in particular, within the Middle East area. Chapter 2 describes the special factors - physical and historical - which have affected Kuwait's urban development, and places the specific study of Kuwait within the general context of

the developing world. Chapter 3 deals with the traditional period in Kuwait's history - particularly its "pre-industrial" history of urban life. Chapter 4 expands on aspects of Kuwait's economic development in the recent period and prepares the way for detailed studies of the consequences of this economic development in Part Two.

One of the most important results of this economic growth was the expansion of Kuwait's population, primarily by immigration, but also by natural increase. These two developments are dealt with in Chapters 5 and 6 respectively. Chapter 7 deals with the expansion of the built-up area consequent upon the swift growth of population, while the following Chapter examines regularities and irregularities in the changing population distribution within the built-up areas. Chapter 9 presents a detailed study of selected attributes of the population, concluding with a factor analysis of 38 variables which together are used to identify "social areas" throughout the State. Chapters 10 and 11 together examine the structure and function of these areas; Chapter 10 deals with the distribution and characteristics of retail and service establishments in Kuwait, while Chapter 11 deals with their use. Finally, these threads are drawn together in a Conclusion which suggests some implications of this study of Kuwait's recent urban development.

CHAPTER ONE

URBANIZATION AND ECONOMIC DEVELOPMENT : THEORETICAL RELATIONSHIPS

I. RATIONALE

Urbanization is as old as civilization and equally complex. It is a continuing process with world-wide manifestations, making comprehensive accounts of its causal factors and geographic occurrence as elusive as its factual definition. But urbanization is not a uniform process operating through time; with a time span extending from the Neolithic to the present day, and a geographic spread covering the entire occupied surface of the earth, almost any generalizations will be severely stretched to encompass even the salient aspects of such a process.

Nevertheless, some general statements on the nature and causes of urbanization are generally accepted by archaeologists, economic historians, geographers, and contemporary sociologists alike. Some of these statements will first be examined in this Chapter, followed by a consideration of their application to the Middle East area as a whole and Kuwait in particular.

In both rich and poor countries two processes radically affecting population and society are distinguishable; urbanization and urban growth. Urbanization as a process is defined as an increase in the proportion of a nation's population located in

urban areas (Hauser, 1965, pp.9-10; Clarke, 1965, pp.45-48; and see below) - while urban growth implies an increase in the population of towns although the balance between urban and rural dwellers may remain largely unaltered throughout (Turner, 1962, pp.5-6). Of the two, urbanization is more common and involves greater structural re-organisation, since as well as the geographical re-location of population by the twin elements of "multiplication of points of concentration and increase in the size of individual concentrations" (Tidsdale, 1942, p.311), it implies an adjustment in the employment structure of a nation. This aspect of urbanization provides the theoretical rationale for linking such processes as economic change and development with urbanization for, it is argued, if fewer people are employed in agriculture, more will be employed in manufacturing and services (U.N. - UNESCO, 1957, pp.6-7). Such a sectoral re-deployment of labour and hence capital is usually regarded as forming the basis for economic modernization in a national economy. Observations confirm this theoretical assumption as Russett's (1967) tables show, for "rich" countries have relatively few agriculturists while the reverse is true for "poor" countries.

While such a generalization, by equating poverty with agriculture, and wealth with industry and services, seriously misrepresents agriculture as a whole, and several countries in detail (e.g. Denmark), it stresses the most important point about urbanization which is, that as urbanization involves not only

population movement but also a sectoral re-deployment of the employed population, urbanization inevitably has prima facie associations with economic development.

Historically these connections can be readily confirmed. Sjoberg's (1960) division of cities into "pre-industrial" and "industrial" formalized the distinction between the two phases of world urbanization associated with the Neolithic Revolution and the Industrial Revolution. Of this close association between economy and urban life during the Neolithic, Hawkes & Wooley (1963, p.414) summarize the factors involved :

"It is an axiom of economic history that real civilization can only begin in regions where the character of soil and climate makes surplus production possible and easy; only so is man relieved from the necessity of devoting all his energies and all his thought to the problem of mere survival, and only so is he enabled to procure from others by means of barter those things which minister to well-being and promote advance but are not naturally available in his own land; moreover, such conditions must prevail over an area large enough to maintain not merely a small group of individuals but a population sufficiently numerous to encourage occupational specialization and social development. So does civilization begin. Most of the community continue to devote their energies to actual food production, but those whose gifts of tastes are of another sort become artisans, specialists in production of a different but scarcely less necessary kind, making those things without which the agricultural worker cannot get on."

In the second major phase of world urbanization, occurring in the later eighteenth and nineteenth centuries in the West, new urban centres grew up alongside older but expanded towns, the growth of which was precipitated by technological innovations - particularly the use of steam power - introduced by the Industrial Revolution. Improvements in communication made possible the organization and administration of unprecedently large urban agglomerations. Today the process of agglomeration continues, resulting in some cases in what Gottman (1961) has called "Megalopolis". Both Gras (1922) and Lampard (1955) regard this contemporary phase distinctive enough to warrant separate consideration; Lampard divides city development into the "pre-industrial", "industrial", and "metropolitan" phases of urban agglomeration.

Traditionally, therefore, the process of economic growth (as defined by Meier & Baldwin, 1964, pp.2-10), in particular the transfer of a section of the labour force from the agricultural or primary sector to the manufacturing and services sectors, has been closely associated with a parallel geographical re-location of the labour force and its dependents. So close is the association that workers such as Ginsburg (1961) and Russett (1967) have used both percentage in urban places (however defined) and percentage employed in non-agricultural pursuits as interchangeable measures of a nation's evolvement on the modernization or economic development scales. For this there is ample statistical support both nationally and internationally, while common sense is

enough to tell us that if people are to produce intensively in manufacturing or associated activities, they must congregate with the factors of production in urban places, relinquishing their more spacious rural origins.

However, one of the major tenets of this present work is that these established relationships between economic development must be questioned in several instances in the developing world. Other workers such as Sovani (1964) and Kamerschen (1968) have indicated failings in accepted theories in non-Western contexts, but unfortunately they go on to consider the phenomenon titled "over-urbanization" and its effects on economic development rather than urbanization as a process with different regional associations. The author's criticism of cross-cultural studies published so far rest on three major points.

1. First, much of the literature on urbanization and economic development (see Breese, 1966, p.51 for a selection) is based on assumption about the definition of these two terms. Economic development is defined as a "process whereby an economy's real national income increases over a long period of time" (Meier & Baldwin, 1964, p.2). Clearly any single element (e.g., per capita income or percentage of the labour force working in agriculture) of this very wide ranging process will fall short of a comprehensive definition.

Similarly with urbanization, for census definitions of urban places vary widely throughout the world. Usually, an arbitrary threshold is chosen (e.g. population in centres with

over 100,000 or over 10,000 population), but these definitions have their limitations (see below).

2. Secondly, while most forms of economic development require some geographic re-location of the labour force, the inverse assumption sometimes made - that a drift of people from rural to urban areas is associated with economic growth - is in some cases erroneous. Azeez (1968) has shown for Iraq that just this form of movement (from the countryside to Baghdad) can act as a negative rather than a positive stimulus to economic development.

Thus the author believes that there is a need to distinguish between two processes often confused as one. These processes are first, true economic growth bringing a substantial per capita increase in real wealth to the total population; and second, economic change bringing only dislocation of the pre-existing economic system usually as a result of some form of contact with the developed world. Between the two there is no sharp dividing line, for in every world economy there is economic growth of a sort, comprising factors operating in alternating directions. Thus the crucial question is to decide whether the present economic shift in a nation's economy is a step likely to bring sustained per capita benefits as well as other material and cultural benefits. (Such a holistic approach to economic development is upheld by most economists because of the indivisibility of economic and total welfare). In drawing this distinction, it is imperative to resist the tendency to "occi-

centrism" displayed in many development studies where development for the poorer nations consists of imitating their more prosperous peers. Interest must be centred on the most efficient combination of land, labour and capital without introducing the bias of this combination in the Western world. (For further discussion see Bowen-Jones, 1968; U.N., 1955; U.N. - UNESCO, 1957).

3. The third overall criticism of the general theory relating urbanization to economic development is the assumption that urbanization can take only one form. Based on economic history derived largely from Britain in the nineteenth century, the associations between mechanisation, factorization, industrialization, and urbanization are assumed to be causal. Less clumsily, an urban of industrial and related developments is seen as an area of major labour deficiencies which are met from the surrounding rural areas. Such a process of rural-urban migration leads to population concentration - in short, urbanization.

We know from several case studies of rural - urban migration that a multitude of factors are involved (e.g. I.L.O., 1960, "Why Labour Leaves the Land"). It is suggested that just as economic development and economic change were distinguished above, urbanization and another process called "pseudo-urbanization" by McGee (1967) should also be distinguished. By urbanization is implied an increase in the proportion of a population in urban areas, taking natural increase and migration

into account, but implying also that the process reflects a true economic need for population re-location enabling a country as a whole to progress to a more evolved level of economic development. Again it seems we are in danger of generalizing from Western-derived models but we must recognize the two processes operating throughout the world today. For by "pseudo-urbanization" (taking place in the under-developed world in varying degrees today), we imply that the geographical re-location of populations takes place but without concomitant changes in the economy which are elsewhere part and parcel of the process. Rural dwellers today may move city-wards with no intentions of joining the industrial society of which geographically they have become a part. Migrants are often ill-equipped to perform even the simplest manufacturing tasks even if the opportunities for employment are available in the first place. Hence, in the urban areas they subsist by performing personal services and indulging in minor retailing, living off the industrial society as parasites instead of being absorbed by it and its occupational structure. (See Azeez, 1968 for an important study of this change). For this reason, as Bowen-Jones (1968) has indicated, employment in the tertiary sector is no guide to the evolution or sophistication of an economy as later Chapters will demonstrate for Kuwait.

In conclusion it appears that our notions about economic development are coloured extensively by the experience of the nations of Western Europe in making the transition from an agricultural and handicraft society to the fully fledged

industrialized and urbanized society today. There, throughout the eighteenth and nineteenth centuries, with only a moderate increase in total population, the factories of Europe had growing demands for labour. The prime source of this labour was the surrounding rural areas. Other factors were involved in this rural - urban migration but as the International Labour Office (1960) pointed out, the differences between wages is the prime motivation in such a pattern of migration. Hence, manufacturing and service industries grew at the expense of agriculture which maintained or increased its productivity by application of factory-derived machines instead of manual labour to production methods. In all the reciprocity implicit in this classic chapter in world economic history produced a harmonious blend of urban and rural life which apparently contributed largely to Europe's ensuing success and prosperity.

In the "poor" countries, whose development process is only beginning, changes are occurring which differ from the model system described for Europe above. First, natural increase of population is a sizeable factor in virtually every developing nation. Since the advent of scientific medicine preceded the Industrial Revolution, both of which were almost contemporaneous in Europe, population growth rates of over 2.5 percent are common. Second, feeding these rapidly expanding populations poses real problems because no Agricultural Revolution preceded this phase of demographic growth. Third, even though the techniques and machinery for progress are available, the levels of literacy and

general advancement of the populations of the developing countries renders these aids unavailable to them. As a result, manufacturing plays only a small part in the total economy, fulfilling the requirements of one section of the population rather than acting as a catalyst to developments in other sectors. Economists have recognised this evolution in many of the countries of the developing world, calling it "dual development" (Meier & Baldwin, 1964, p.326) leading to the formation of "dual societies" (Boeke, 1953, p.4). Such an evolution obviously warrants close attention because of both its practical and its theoretical significance.

The foregoing theoretical considerations can now be summarized and formally stated as hypotheses which it is the task of this work to test and examine further. Thence it will be possible to look in detail at the Kuwait urbanization and its developmental associations.

II. HYPOTHESES

1) It seems that while urbanization historically has close associations with economic development, some re-definition of terms may be necessary to render the relationship universally valid. In particular, since urbanization is not necessarily uni-directional, both historical and regional variants of the process must be expected and incorporated into its general theory.

2) Just as urbanization and "pseudo-urbanization" are distinguished, so economic development and economic change may also be distinguished. Further, since urbanization and economic

development are demonstrably linked, the latter variables (pseudo-urbanization" and economic change) may also be connected.

3) Several studies have shown that in developing countries a modern and traditional sector may co-exist. Such a dualistic development may be reflected in a strong rural - urban gradient (Hartley, 1968) or even within the major urban agglomerations themselves (Azeez, 1968; Abu Lughod, 1960, 1961). Both these dualisms merit close attention, especially in the bearing they may have on established theories of urban development and areal differentiation within cities.

4) External contacts are significant factors in inducing dualism - both economic and social - into the Third World. Hence established occidental theory may apply in general but in detail may require modification according to indigenous cultural and other factors.

5) Finally, it is apparent from previous studies that a third phase of world urbanization may be recognized, differing in origin from both its Neolithic and Industrial Revolution predecessors. Manufacturing in many cities of the developing world fulfils a secondary role to the provision of goods and services. Thus the major incentives to migrate to these cities are not the prospects of higher paid employment in factories; rather they are the "push" factors operating in the rural areas.

III. MIDDLE EAST URBANIZATION : EXTENT AND SPECIAL CHARACTERISTICS

To confirm or refute the hypotheses presented above, many studies in depth of the urbanization process and its correlates are obviously called for. Such a wide ranging task is beyond the scope of the present work, but before embarking on a close analysis of the Kuwait urbanization it is of paramount significance to set this study in both its regional and world-wide contexts. In order to compare levels of urbanization internationally a heavy reliance must be placed on the statistics provided by the U.N. since they are the only directly comparable figures available. Attention has already been drawn to the incompatibility of the definitions of an urban place in various national censuses (Clarke, 1965, pp.45-48; Jones, 1966, pp.3-5).

Table 1.1 taken from Davis & Hertz shows how the world urban population has increased very rapidly in the last 150 years.

Table 1.1 TOTAL WORLD POPULATION AND WORLD URBAN POPULATION 1800 - 1960

Year	World Population (Millions)	Population in Cities of 5000 and over (Millions)	Percentage in Cities over 5000	Percentage in Cities over 100,000
1800	906	27.2	3.0	1.7
1850	1171	74.9	6.4	2.3
1900	1608	218.7	13.6	5.5
1950	2400	716.7	29.8	13.1
1960	2995	948.4	31.6	20.1

Source : i) DAVIS & HERTZ in U.N., 1957, p.114 (1800-1950)

ii) U.N., 1962, Demographic Yearbook, tables 9 & 10 (1960).

Of greater immediate significance is the regional variation in the proportion of the population in urban places. The definition of an urban place varies widely - some countries basing their definitions on administrative boundaries and the status of the area they enclose and others treating any area with a population agglomeration as low as 250 (e.g. Denmark) as an urban place. Unfortunately, the U.N. only collect internationally comparable statistics for urban centres which contain over 100,000 people. This arbitrary threshold - particularly in the Middle East - produces anomalies. For example, Tripoli in Lebanon recently surpassed 100,000 in population with the result that Lebanon's index of urbanization leapt from 16.3 to 29.8 percent from the mid-1950s to the mid-1960s using this method of definition for urban areas.

As an alternative, we can use the rural population and subtract it from a country's total population to give us a figure for total urban population which not only incorporates all centres of 100,000 and over, but also smaller centres which are important constituents of that country's urbanized population. This, the author believes, produces a more sensible ordering of individual nations by degree of urbanization than other methods using size thresholds.

A recently published monograph allows us to bring together information on urban populations first for the world and secondly for individual nations of the Middle East.

Overall it seems from Table 1.2 that Northern Africa and Southwest Asia (the Middle East) are less urbanized than two-thirds of the world's major regions. However, these average figures for Northern Africa and Southwest Asia conceal a great variety of levels of urbanization within these two regions (Table 1.3).

IV. LEVELS OF URBANIZATION IN THE MIDDLE EAST

With levels of urbanization (percentage in urban areas) ranging from some of the highest values in the world (over 70 percent) to values below those of Eastern Africa and Oceania (the world's most "rural" regions), it seems we can divide Middle Eastern nations into four major groups on the basis of Table 1.3.

Table 1.2 TWO MEASURES OF WORLD URBANIZATION IN 1960

World region	Population in Urban areas (percent)	Population in cities of over 100,000 (percent)
Australia - New Zealand	77.7	53.4
Northern Europe	72.2	57.3
Northern America	69.7	49.8
Western Europe	68.0	41.0
Temperate South America	65.0	45.5
Japan	63.5	41.9
U.S.S.R.	50.1	24.9
Eastern Europe	48.4	20.5
Middle America	46.2	17.3
Southern Europe	45.5	24.1
South Africa	44.8	26.5
Tropical South America	44.7	23.3
Caribbean	38.4	17.3
Northern Africa	29.6	18.2
Southwest Asia	29.5	15.1
East Asia	18.0	11.8
Southeast Asia	16.6	9.7
South Central Asia	16.4	8.5
Western Africa	14.7	5.0
Middle and Southern Africa	11.6	4.5
Eastern Africa	7.5	2.8
Oceania	6.0	-

See text for explanation.

Calculated from : Davis, 1969, Table A.

Table 1.3 URBAN AND CITY POPULATIONS * FOR THE MIDDLE EAST IN 1960

Country	Percentage in Urban Areas	Percentage in Cities
South-West Asia	29.5	15.1
Israel	77.4	39.4
Bahrain	72.7	-
Kuwait	70.1	52.5
Qatar	60.0	-
Trucial States	40.0	-
Jordan	39.3	13.3
Iraq	39.2	21.4
Syria	36.9	26.4
Cyprus	35.9	17.7
Lebanon	33.1	26.8
Iran	32.9	17.3
South Yemen	28.0	23.5
Turkey	26.6	12.2
Saudi Arabia	6.2	13.5
Muscat and Oman	3.5	-
Yemen	3.4	-
Northern Africa	29.6	18.2
U.A.R.	37.8	26.1
Tunisia	37.0	15.6
Algeria	31.2	16.4
Morocco	29.1	18.9
Libya	24.6	21.3
Sudan	7.3	2.7

* Statistics for the proportion of the population in cities are calculated using an arbitrary threshold of 100,000 people and over to define a city. Percentage in urban areas includes centres of all sizes which were not defined as "rural" by the country concerned.

Calculated from : Davis, 1969, Table A.

GROUP A : Over 40 percent in urban areas

This group consists of five small countries (all under 83,600 sq.km. in area), four of which are oil-producing states in the Persian Gulf. These states (Bahrain, Kuwait, Qatar, and the Trucial States) have strictly limited agricultural opportunities, so that rural dwellers, comprising nomadic Badu in the main, are small in number. Berry (1961) has indicated a statistical link between a nation's size and its level of urbanization.

GROUP B : 30 - 40 percent in urban areas

The nine states in this group (three of them in Northern Africa) have a variety of characteristics. Levels of urbanization are about the regional average. All (Jordan, Iraq, Syria, Cyprus, Lebanon, Iran, U.A.R., Tunisia, and Algeria) have important agricultural sectors at least 90,000 in area with the exception of Cyprus and Lebanon. Notably Iran and Algeria (1,648,000 and 2,382,000 sq.km. in area respectively) are less urbanized than the group as a whole.

GROUP C : 20 - 30 percent in urban areas

Containing South Yemen, Turkey, Morocco, and Algeria, this group has relatively few obvious attributes in common. They are all however medium-sized countries (445,000 - 1,759,000 sq.km. in area) and with dominantly agricultural economies.

Libya's degree of urbanization is rising rapidly above the levels shown here (Hartley, 1968).

GROUP D : under 10 percent in urban areas

Sudan, Saudi Arabia, Muscat and Oman, and Yemen, are all strongly rural countries. They are also relatively "poor" and as yet are little touched by widespread industrialization. Towns in Saudi Arabia, as in Libya, are growing rapidly in size and number as the effects of the oil industry are more widely felt.

Thus it seems that Kuwait ranks not only amongst the most highly urbanized states in the Middle East, but also in the world (Tables 1.2 and 1.3). Inevitably the comparison of Kuwait with states as large as Iran and Turkey needs some justification. Two points substantiate the parallels drawn between very different groups of nations above.

First, in the world today, national boundaries are increasingly significant divisions of the earth's surface, which in our geographical studies we must recognize and use despite the anomalies apparent in the status quo.

Secondly, when comparing, e.g., Libya with Kuwait, the "effective state territory" of Libya (i.e. the Benghazi and Tripoli plains) is not much larger than Kuwait's effectively occupied territory. Subsequent analyses provide some more substantive reasons for drawing similar international parallels despite the problems involved.

V. ELEMENTS PECULIAR TO THE URBANIZATION OF THE MIDDLE EAST

Amongst the general factors responsible for the world-wide growth of towns, Hauser (1965, p.1) cites the following factors :

i) A widespread increase in overall population since the Neolithic.

ii) Man's increased ability to regulate and control his natural environment.

iii) A rise in the level of technical competence.

iv) Developments in social and political organization.

While these factors undoubtedly apply to the Middle East as much as to other parts of the world, they fail to explain the urban dominance of many cities of the region and the high level of urbanization in at least half of the Middle Eastern nations. Certainly Berry's three propositions - that a state's size, its political immaturity, and its economic simplicity (Berry, 1961) are determinants of that state's degree of urban centralization - are particularly relevant to the Middle East where all three attributes often coincide within a single state.

In addition to these factors there are a variety of more specific reasons why Middle East cities are abnormally influential in the area. Fisher (1966) mentions several, the main reason being that because of "a variety in geographical environment - rich oasis and coastal plain, mountain, desert, steppe and forest - there soon arose a diversity of economic

production, and hence a need for exchange and market centres" (p.8). He also cites the following :

i) The significance of the defence role, pointing out the number of tribal strongholds which later became cities - Aleppo, Ankara, Mosul, and Tabriz.

ii) Various dynasties established "planted" towns in the Middle East, e.g., the Qajars and Teheran in 1788.

iii) Small energetic groups seized power and ruled large territories from small urban bases, e.g., the Ottomans.

iv) All the religions of the Middle East have an urban origin; numerous large cities have grown up with this religious role as their major function - Jerusalem, Mecca, Medina, Karbala, Najaf.

v) Continued external contacts have been conducted with the outside world through the coastal cities since the Greek and Roman periods onwards, resulting in an unprecedented degree of economic dominance.

vi) Wealth is concentrated in the cities by the presence of absentee landlords within their bounds.

vii) Politically, Middle Eastern cities are dominant because government was until recently almost entirely concerned with the urban areas to the detriment of the rural areas.

To these we can add a further list of factors given by Shiber (1964, pp.19-24). They include :

i) The recent devolution of political autonomy and the emergence of new nation states, each of which requires its national capital and its network of regional urban administrative centres. Post-war examples include Iraq, Egypt, Syria, Lebanon, Libya, Algeria, and Kuwait.

ii) Oil discoveries have accelerated urbanization by focussing direct employment opportunities in oil camps and at tanker terminals and indirect employment opportunities in the capital cities. Examples include : Iraq, Iran, Kuwait, Libya, Bahrain, Saudi Arabia.

iii) As a result of the oil revenues, capital has been made available for investment - mainly in urban areas. Notable benefactors from this flow of capital are Lebanon and Egypt.

iv) Inevitably the establishment and expansion of Israel has unsettled large proportions of the rural population of Palestine. Many of these refugees - totalling approximately 750,000 - took up residence in urban rather than rural areas such as Amman, Kuwait, Beirut and Riyadh.

v) Following on from this, changes of regime have prompted sizeable numbers of people to migrate to urban areas. Frequent coups and the use of the military in government are spurs to movement, although not all of this movement is from the countryside to the cities.

vi) Since government has traditionally been city-based and city-orientated, policies encouraging rural development have

been sadly lacking. As a result a great gulf separates levels of living in the towns and in the countryside of most Middle Eastern countries.

vii) Finally, the application of foreign aid (both civil and military) inevitably focuses attention on the points of external contact with the aid-giving countries.

CONCLUSION

This Chapter has in turn examined the general theories linking urbanization and economic development on a world wide scale; narrowed this with a study of the application of these theories to the Middle East in particular; and concluded with a discussion of the elements which are unique within the Middle Eastern context. The Chapter shows that the links between the two processes of economic development and urbanization are by no means as simple as some texts suggest. It raises the large question of whether urbanization and development are problems to be solved on a universal front or within a smaller regional context. Similarly, it questions the validity of both cross-cultural and cross-temporal applications of general urbanization theories. At this stage no firm conclusions can be reached concerning these propositions. The foregoing study justifies the closer examination of Kuwait to answer these and other questions. It is apparent, however, that while Kuwait itself has been regarded as an exceptional state internationally, it has important parallels within the Middle East area and beyond.

In addition, its pattern of urbanization will have to be considered in the formulation of any general theory concerning the causes and progress of urbanization as a whole in non-Western contexts.

The task of the next and subsequent chapters will be, first to outline the physical and economic factors underlying the Kuwait urbanization, followed by a close examination of its progress, characteristics and implications.

CHAPTER TWO

FACTORS INFLUENCING KUWAIT'S URBANIZATION :

1. ENVIRONMENT

Urbanization is not a wholly continuous process; in the Middle East, certainly, as Adams (1965) has shown for Iraq, phases of urbanization alternate with phases of "ruralization". This chapter traces both relatively constant physical elements and more fluid historical and economic changes which have affected urbanization in Kuwait up to the outbreak of the Second World War. The subsequent chapter follows this through to the present day and identifies historical and contemporary phases of urbanization.

In Arabia, periods of prosperity have alternated with periods of hardship and strife. It is imperative to isolate the origins of these phases to comprehend the present period of prosperity and its correlate - urbanization. As a general statement, it is possible to say that Kuwait's periods of prosperity have coincided with periods when external contacts were most prolific and widespread, while periods of depression occurred when Kuwait was restricted to the resource base within its own frontiers. What are the indigenous resources of Kuwait and what kind of setting does Kuwait provide for the growth of towns and cities?

THE ENVIRONMENT

Kuwait is a small state with only recently defined boundaries. It covers an area of 16,000 sq.km. of which 1,000 sq.km. represents the offshore islands. To the south lies the Neutral Zone jointly administered by the Kuwait and Saudi Arabian Governments and with an area of 5,700 sq.km. Kuwait lies between 28° and 30° north of the Equator and between 46° and 48° east of the Greenwich meridian. Bounded to the north by Iraq, and to the west and south by the al-Hasa province of Saudi Arabia, Kuwait consists of a small triangle of land centred on the Bay of Kuwait (Fig.21).

This bay, extending 45 km. westwards into the State, was until recently Kuwait's principal natural asset. Along the entire Gulf coast of Arabia there is a dearth of good natural harbours between Basra in Iraq and Dubai in the Trucial States. The Bay of Kuwait, despite its shallowness and tendency to silt up (it is, in fact, a fossil river estuary) nevertheless provided a sufficient depth of water and harbour facilities for the small boats carrying on the bulk of Kuwait's coastal traffic. The Gulf itself, with an area of 240,000 sq.km., has a mean depth of only 25 m.

I. RELIEF AND SURFACE FEATURES

Kuwait's surface lacks bold relief. In the west the land rises to just over 300m. above sea level, shelving gradually eastwards so that the eastern third of the State - including all

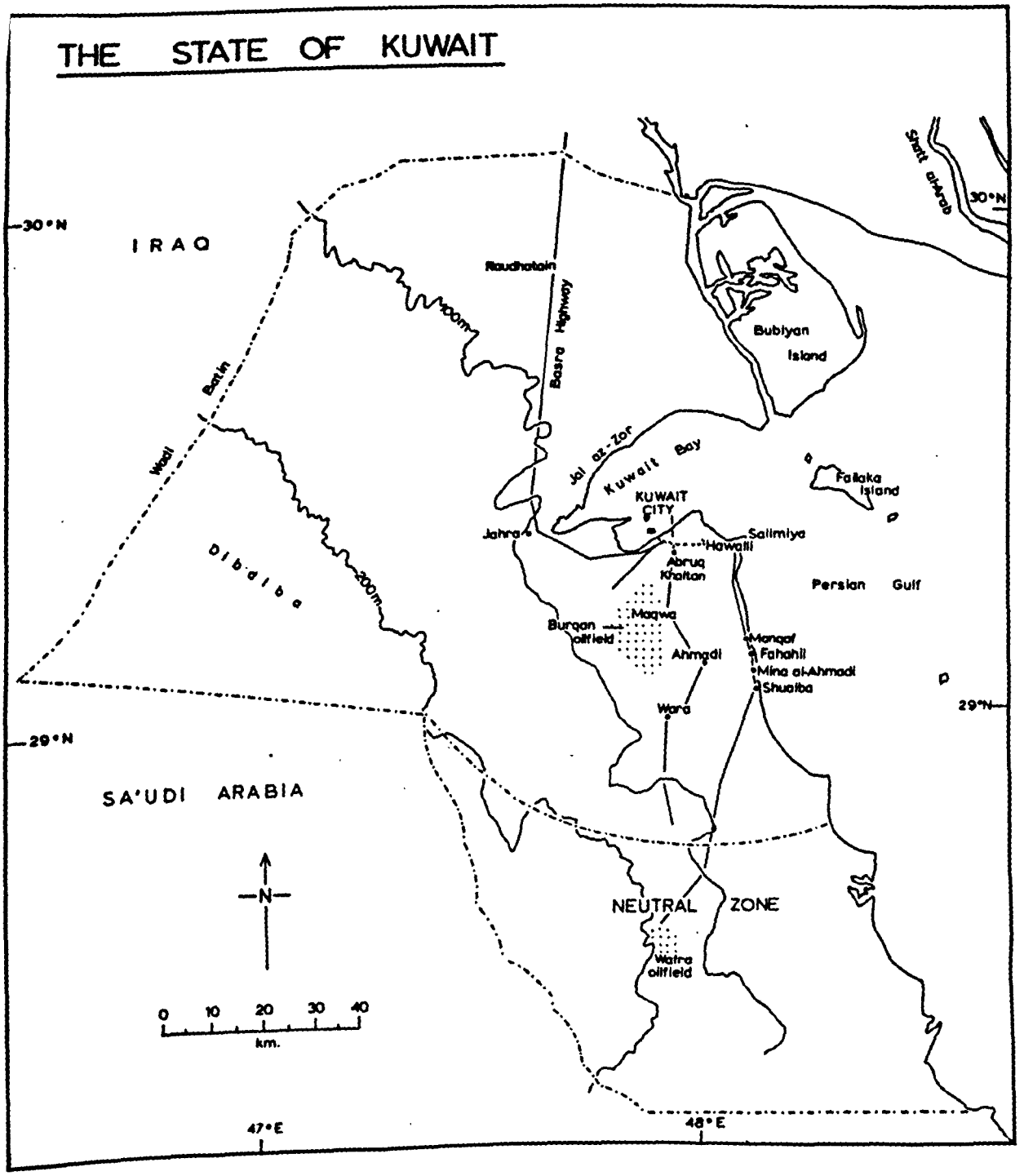

THE STATE OF KUWAIT
30°N
IRAQ
Raudhatain
Basra Highway
Bubiyan Island
Shatt al-Arab
30°N
Wadi Batin
100m
Jal az-Zor
Kuwait Bay
Failaka Island
KUWAIT CITY
Jahra
Salimiya
Hawalli
Abraq Khaitan
Dibdiba
200m
Persian Gulf
Burgan oilfield
Magwa
Ahmadi
Mangaf
Fahahil
Mina al-Ahmadi
Shuaiba
Wara
29°N
29°N
SA'UDI ARABIA
N
NEUTRAL ZONE
Wafra oilfield
0 10 20 30 40
km.
47°E
48°E

Figure 2.1

the permanently inhabited districts - is below 150 m. above sea level.

The uplands to the west comprise gently undulating gravel plains whose monotony is broken by occasional knolls of sand collected around scrubby bushes called "hamdth" in Arabia (a generic word for saline brushwood), with "nussi" grass (Aristida plumosa) and "arfaj" scrub (Rhanterium epapposum Oliv.). Further details of the vegetation of the district are provided in Dickson (1955) and Dickson (1956). Evidence of fluvial erosion is widespread but the most striking relief feature of the uplands is the great Wadi Batin trending SSW to NNE along Kuwait's western frontier. On average 8-10 km. wide, with a relief as great as 70 m., the wadi forms the most marked feature of the western gravel plains.

Eastwards the gravel plains fade gently into an area of low relief where the surface is mainly composed of wind-blown sand. Three notable relief features stand out from this almost flat landscape, the first of which is the Jal az-Zor escarpment running along the north shore of the Bay of Kuwait in an arc 80 km. in length. Local relief reaches 130 m. at Mutla' near the south-west corner of Kuwait Bay where lower Fars Formation limestones (lower to middle Miocene age) outcrop in a jagged ridge (Milton, 1963).

Second, the Ahmadi ridge, on which is situated the oil town of Ahmadi, stands out as a long whale-back rising to 115 m. above sea level, paralleling the east coast and just 8 km. inland.

The feature is possibly the result of horizontal compression in post-Eocene times and is hence related to the Zagros orogeny (Milton, op.cit., p.7). The Ahmadi ridge provides the necessary elevation for the gravity-feed storage tanks supplying the tanker terminals of Mina Al-Ahmadi. In addition, the ridge provides a slight cooling effect in summer as well as a pleasantly undulating site for the town of Ahmadi.

The hills at Wara, Burqan, Gurain, and Madiniyat in the south-west corner of the State provide the third physical feature of note in eastern Kuwait. Rising to about 30 m. above the surrounding plain, these hills are composed of limestones of the Kuwait Group (Miocene-Pleiocene age), often capped with hard siliceous sandstone and chert which weathers to a dark brown colour.

Apart from the uplands of the south-west and the three groups of features mentioned above, Kuwait has a monotonously level surface which is covered only by a low scrubby vegetation complex. The climatic factors responsible for this scattered vegetational cover are important in that they also have a bearing on both human comfort and economic life.

II. KUWAIT'S CLIMATE

Kuwait City in summer is among the hottest capitals in the world, while in winter temperature minima approach freezing point. Equally extreme is the rainfall which, as long as records have been kept (since 1955), has never exceeded 200 mm. annually.

In several very dry years less than 30 mm. has been recorded. A little elaboration on these points is required before considering some aspects of the daily weather pattern.

Table 2.1 presents a summary of the available climatic data on Kuwait. Two seasons can be easily recognized with only short intervening periods of climatic transition.

a) SUMMER

Between May and September, mean monthly temperatures exceed 30°C. More specifically, average night minima exceed 24° during this period, while monthly maxima are extremely high (over 37°). With temperatures of this order, relative humidity drops below a maximum of 50 percent throughout the summer. Although the ambient air temperatures are extremely high - too high for strenuous outdoor activity - the dryness of the air throughout the summer does facilitate body cooling. By comparison, less fortunate locations such as Muscat town and Bahrain suffer both high temperatures and high humidities in summer.

Rain is never recorded but winds can be relatively strong during the summer. In August, 30.2 percent of the winds exceed 11 knots compared with the January figure of 26.0 percent. These are surface winds, very largely resulting from differential heating of the surrounding land and water masses and have no vertical resultant despite their great potential energy, because of a high level intrusion of westerly air below which is created

All Readings are in Centigrade		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Period over which Records Have Been Taken	Remarks
Ambient Air Temperature	Absolute Maximum	26	33	39	42	48	48	49	49	46	42	37	31		
	Average Maximum	18	21	26	31	37	43	44	44	41	35	26	20	1955 — 1964	Occurs between 1400 & 1600 hrs.
	Mean	13	16	20	25	31	35	37	36	33	27	20	15		
	Average Minimum	8	10	14	19	24	28	29	28	24	19	14	9		Occurs between 0400 & 0600 hrs.
	Absolute Minimum	—3	0	5	9	14	22	23	21	17	11	6	—1		
Dry-Bulb Temperature	Mean	13.5	16.7	20.1	24.9	31.1	36.0	37.2	37.1	33.0	27 5	20.1	14.9	1961 -- 1964	In Screen
Wet-Bulb Temperature	Mean	10.3	12.3	13.8	17.3	19 9	21 8	23.0	23.3	20.8	18 5	15 0	11.0		
Sun Radiation	Absolute Maximum	57	65	75	78	79	79	79	79	76	72	66	62	1958 -- 1964	" Black-Bulb " Thermometer
	Average Maximum	49	54	59	66	71	74	74	74	70	65	55	49		
Grass Minimum	Absolute Minimum	-4	1	2	6	11	14	14	13	11	8	—1	—4	1955 — 1964	Temperature Just Above Ground Surface
	Average Minimum	7	9	12	17	21	23	25	24	21	16	12	8		
Mean Sea Temperature		16	17	20	23	28	30	32	33	31	27	23	17	1955 -- 1964	At the intake to Distillation Plant
Relative Humidity (%)	Average Maximum	75	74	69	63	54	40	43	44	48	59	71	80		
	Mean	63	53	47	43	36	27	28	29	31	38	51	61	1955 — 1964	Hygrograph
	Average Minimum	43	33	26	24	18	13	13	13	14	18	32	43		
Atmospheric Pressure (mm.)	Absolute Maximum	773	770	771	768	762	757	754	755	763	765	772	772		
	Mean	764	763	760	758	755	751	748	749	753	759	763	765	1955 — 1964	Mean Sea Level
	Absolute Minimum	752	751	751	749	747	744	743	743	746	749	755	755		
Rate of Evaporation of water (mm./day)	Piche	4.9	6.9	10 4	13.9	17.9	24.3	23.7	22.3	18.6	12.8	7.9	5.6	1961 — 1964	At Shuwaikh — In Screen
	Class 'A' Pan	3.1	4.5	6.3	8 9	13.1	18.6	18.0	16.7	12.9	8 7	4.9	3.1		At Exp. Farm " Open " in Station Compound
Average Hours of Sunshine/day		7.7	8.4	8.3	8.2	10.1	10.7	10.3	10 8	10.3	10.0	8.1	6.9	1955 — 1964	Campbell-Stokes Recorder
Mean Ground Temperature	5 cm.	15.2	18.4	22.4	27.7	33.0	37.2	38.8	38 8	35 4	29.7	21.9	16.5		Bent-Stem Soil Thermometer
	10 cm.	15.5	18 8	22.7	26.2	32.4	36.2	37.9	38 3	35.2	30.0	23.2	17.3		" " " "
	20 cm.	16 6	19.3	23.1	27.6	32.5	26.0	37.4	37.8	35.3	30.3	24.0	18.3		" " " "
	30 cm	17.7	19.6	23.1	27.2	32.2	35.6	36.8	37.3	35.3	31.1	25.5	19 9	1961 — 1964	Symons-Pattern Thermometer in Steel Tube
	60 cm.	19.9	20.5	23.1	26.5	30.6	33.8	35.3	36.4	34.9	31.6	22.3	22.4		" " " " " "
	120 cm.	23.1	22.2	23.4	25.4	28 1	30.9	32.4	34.3	33.6	31.9	29.2	25.2		" " " " " "
Number of days visibility less than 2 miles	1955	0	1	2	1	1	0	1	0	0	0	0	0	Yearly Total	
	1956	2	7	1	9	6	9	2	2	1	1	4	3	47	
	1957	3	3	3	2	2	2	2	2	0	1	1	1	22	
	1958	2	0	5	2	2	6	1	1	2	1	1	2	25	
	1959	2	1	0	1	2	9	8	6	3	1	1	1	35	
	1960	2	2	4	5	8	6	5	2	1	0	2	1	38	Obscurity due to Rising Sand Or Fog
	1961	2	3	6	2	9	10	14	4	6	2	2	0	60	
	1962	1	5	2	5	4	4	3	1	2	0	4	1	32	
	1963	3	4	9	7	7	11	8	1	1	1	0	1	53	
	1964	2	1	3	3	3	7	9	7	1	0	1	1	37	
Rainfall (mm.)	1955	8.6	—	6.4	6.0	7.0	—	—		—		0.5	44.8	Yearly Total	
	1956	10 8	4.7	6.0	14.2	—		—				—	119.3	73.3	
	1957	9 8	14.3	15.4	26.3	8.9					0 1	89.1	1.3	155.0	
	1958	12.1	0.7	7.6	2.2	1.9						15.7	61.7	165.2	
	1959	32.2	13.5	10.0	9 4	1.8			—			9.3	23.8	101.9	
	1960	7.7	2.6	2.7	4.2				—			11.3	0.1	100 0	
	1961	22.7	16.3	45.9	29.1	1.1	—	—	—			66.3	14.4	28.6	Tilting-Syphon Self-Recorder
	1962	27.1	3.2	4.5	18.9	0.1	—	—	—	—	—	0.1	12.7	195.8	
	1963	0.4	23.9	1.4	19 9	21.4	—	—	—	—	—	7.1	13.1	66.6	
	1964	12.2	2.2	2.2	—	—	—	—	—	—	—	1.1	8.6	87.2	
														26.3	

Table 2.1 Except where stated, all readings were taken at Shuwaikh, Lat. 29°20' N., Long. 47°57' E.

a stagnant zone of still air (Fisher, forthcoming). As the wind roses show (Figure 2.2), the prevailing winds at all seasons are north-westerly, although in summer strong south-easterly winds are occasionally recorded.

Clear skies, strong sunshine, and the exclusion of the westerlies are responsible for the high temperatures in summer. While there is a difference of a few degrees between the coastal and the inland stations (Table 2.2), the waters of the Gulf exert only a small moderating influence on summer temperatures. The explanation lies in the shallowness of the Gulf waters whose temperature rises to over 30°C in mid-summer (Table 2.1).

Table 2.2 AVERAGE AUGUST TEMPERATURES AT 6 STATIONS IN KUWAIT IN °C.

INLAND	Mean of Maxima	Minima	COASTAL	Mean of Maxima	Minima
Airport	44.8	29.0	Shuwaikh	44.2	28.7
Umm Al-Aish	46.2	27.5	Fahahil	42.3	30.2
Ahmadi	44.3	28.9	Ras Al-Khafji	39.0	29.0

Periods of recording : 1956-1968

(Umm Al-Aish and Ras Al-Khafji 1961-1968)

b) WINTER

Between winter and summer and vice versa, only very short periods of pleasantly warm and sunny weather intervene which hardly warrant the titles of spring and autumn. At the end of the summer, temperatures drop sharply from September onwards,

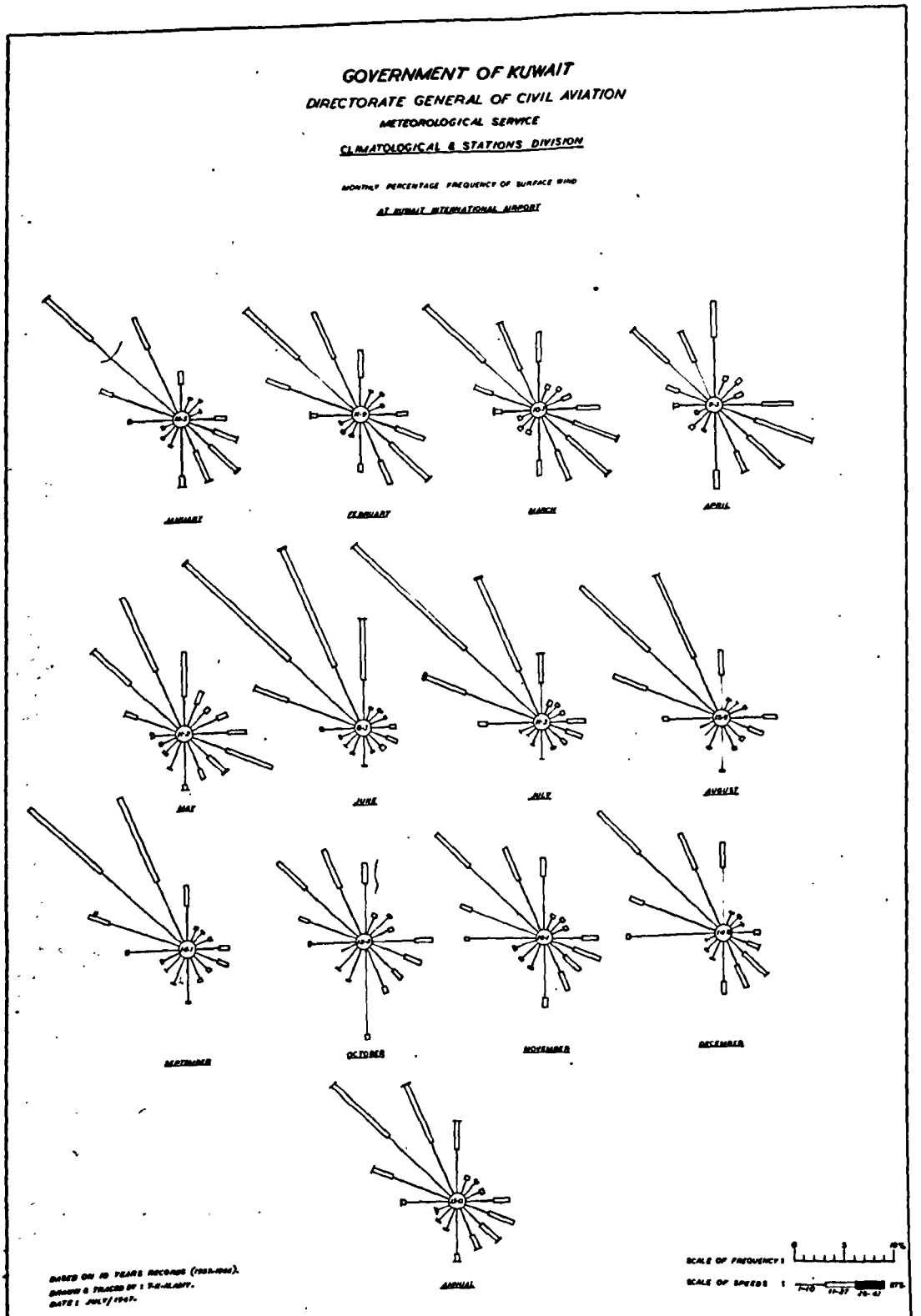


Fig. 2.2 Wind roses for Kuwait

while the rise in temperatures which takes place in May is equally sudden. Explanations of this phenomenon in terms of world air mass climatology can be found in Fisher (1961), Trewartha (1962), Banerji (1931), and H.M.S.O. (1963).

Winter is characterized by a greater unpredictability in both climate and daily weather than summer. Day to day variations in temperature, visibility and cloud cover occur in accordance with the movement of frontal disturbances through the Gulf. If we compare the January and July mean temperature maxima and minima at Shuwaikh over the 12-year period 1956 - 1967, it can clearly be seen that winter is a period of changeable weather compared with the monotony of the weather in summer. In January the relative variability of the mean maxima was 39.3 percent, while in July the relative variability was only 1.6 percent. As for the mean minima, in January the relative variability was 62.3 percent compared with only 1.0 percent in July.

As expected with such very low total rainfall amounts, both seasonal and areal variability is large. Falls are local, and as Table 2.1 shows, can occur in any of the six winter months - even outside them (e.g. in May 1963). Coupled with the high rates of evaporation, such a rainfall provides an inadequate basis for even dry farming methods.

c) DAILY WEATHER

Summarizing, it is plain that only for relatively short transitional periods - "spring" and "autumn" - is the weather in

Kuwait congenial to outdoor life. In mid-winter it can be extremely cold with occasional heavy downpours of rain that produce traffic chaos and widespread flooding. In addition, outbursts of cold northerly air lasting for several days called "Shamals" can cause great discomfort indoors and out, not only because of the low air temperatures, but also because of the fine dust held in suspension in the air. This dust, penetrating every crevice in homes and offices, obscures visibility and causes severe disruption of communications. For example, at Christmas 1967, Kuwait airport was closed for a week due to a dust-storm such as this.

By contrast the summer season poses almost exactly opposite meteorological hazards. With high temperatures, clear skies and hot breezes, evaporation both from the ground and from the skin is extremely high. Dehydration is a serious hazard amongst manual labourers working in the sun (Salem, 1966; Ffrench, 1968). Ground visibility is poor due to the shimmer of a persistent heat haze. All metal objects exposed to the sun become untouchable because of their heat. Car parks have to be roofed and cars themselves have to change to a thicker form of oil for the summer. Little refreshment can be gained from sea-bathing because of the high temperatures and salinity of the Gulf. While the summer is undoubtedly an uncomfortable season in Kuwait and one in which Kuwaitis and non-Kuwaitis alike try to avoid by migrating temporarily to Lebanon or Europe, the discomforts of the

summer have been greatly relieved by the widespread use of air-conditioners. Kuwait claims to be the most extensively air-conditioned world capital for, in summer, electricity consumption is at its peak because of the air-conditioning units. Houses, offices, shops, hotels, restaurants, and even cars are fully air-conditioned. Walking around the streets in summer, the buzz and whine of the air-conditioners are a feature of almost every building one passes.

Having described the physique and climate of Kuwait, the following section will be concerned with the compounding of these elements to form the physical resources available to man. The section will begin with a survey of Kuwait's water resources, fundamental to all economic life, moving on to a consideration of potential for agriculture, fishing, and industry.

III. WATER RESOURCES

a) Occurrence

Four sources of portable water are known to exist in Kuwait. They are :

(i) Water occurring in scattered shallow well-groups in the eastern half of Kuwait. This water, derived from percolation in hollows during rainy periods, has been used for long periods by the Badu at such places as Jahra, Subaihiya, and Tawil. It becomes saline and almost undrinkable in late summer.

(ii) Water occurring in the Dibdibba formations about 30 m. below the surface. This fossil water is fresh, and was first

discovered in 1960 at Raudhatain in the north of Kuwait near the Iraqi border. The Raudhatain reservoir was estimated as containing at least 100 billion gallons in 1961.

(iii) A third deeper source of ground water is that occurring in the Dammam limestone which outcrops at Ahmadi and the dips north-eastwards at 9ft/mile. The static fluid level falls in the same direction at less than 4ft/mile but unfortunately the proportion of total dissolved salts rises sharply from its lowest value of 500 parts per million in the south-west to over 1,000 p.p.m. nearer Kuwait City (Milton, 1963, pp.4-5).

(iv) A final source of water is the sea. Distillation began at Mina Al-Ahmadi in 1950 and since then rapidly increasing volumes have been produced by the distillation plants of both oil companies and the government. In 1966, over 58 percent of the water used in Kuwait came from the numerous distillation plants (Statistical Abstract, 1967, Table 88).

b) Development

Up to about 1925 the population relied entirely on the brackish water occurring in shallow wells in eastern Kuwait. Within Kuwait City a few groups of wells produced potable water but most of the city's population relied on water from Shamiya and Hawalli outside the Old City wall (Chapter 4). With an increased population after 1920 (see below) these shallow wells with their seasonal increase in salinity provided insufficient water for the city. The nearest available source of potable water

was the Shatt al-Arab (lower Tigris-Euphrates), so that after 1925 a sea-borne trade in fresh water began which lasted until the opening of the first distillation plant in 1950. Initially water from the Shatt was scooped up in goatskins and barrels and carried in "booms" (dhows) and barges to several small reservoirs at Shuwaikh. Later, tanks replaced the goatskins and barrels. By 1939 the trade had become important enough for a water-carrying companyto be formed with a fleet of several dhows. Thirty-five dhows were engaged in this trade by 1946, and three further ships were privately operated. Even the Kuwait Oil Company (K.O.C.) was supplied with this water which was distributed by donkeys and motorized scooters. Its selling price was 20 fils per gallon (20 fils is approximately equal to 6d sterling). In the peak year of 1947, 80,000 gallons of Shatt water were reaching Kuwait daily (Ministry of Guidance, 1963, p.128).

By 1950, demand by K.O.C. and the growing population of Kuwait City had far outstripped supplies from the Shatt and the shallow local well sources. Sea water distillation was begun at Mina Al-Ahmadi (Fig.2.1) to meet these expanding demands with a daily production of 600,000 gallons. First 80,000 gallons and then 250,000 gallons were pumped the 40 km. across the desert to Kuwait, until in 1953 the Government opened the first of several new distillation plants at Shuwaikh, just west of Kuwait City. Capacity rose from one million gallons daily in 1953 to six million gallons daily in 1960. Present capacity is eight million gallons daily which will rise in the near future to twelve million gallons.

Fig. 2.3 illustrates the quickening demands placed by Kuwait's population on these distillation facilities.

In addition to the Shuwaikh desalinization facilities, sea water is also distilled at Shuaiba, the Government's new port and industrial estate in south Kuwait (Fig.2.1). There three million gallons of fresh water are produced daily, while a further capacity of two million gallons is under consideration. Present desalting capacity totals 11 million gallons per day, but a projected capacity for 1972 in the Five Year Plan is 42 million gallons daily (Planning Board, 1967).

Parallel with this rapid expansion of distillation facilities has been an equally rapid development of the brackish water resources at Sulaibiya, 27 km. south-west of Kuwait. Some of this water, called simply "Sulaibiya" in Kuwait, is blended with the distillate to improve its overall taste, and the rest is distributed in tankers for use in sewers, in gardens, and for agriculture. At present most houses in Kuwait have both brackish and fresh water supplies delivered to them by tanker lorries. Some drinking water is still delivered by motorized scooters.

Fig. 2.3 shows the rapid rise in the production of Sulaibiya water, in 1967 totalling 12 million gallons daily. Particularly noteworthy is the rising demand for both brackish and fresh water in summer.

Overall, a heavy reliance on desalinization occurs to compensate for the deficiency of rainfall and ground water.

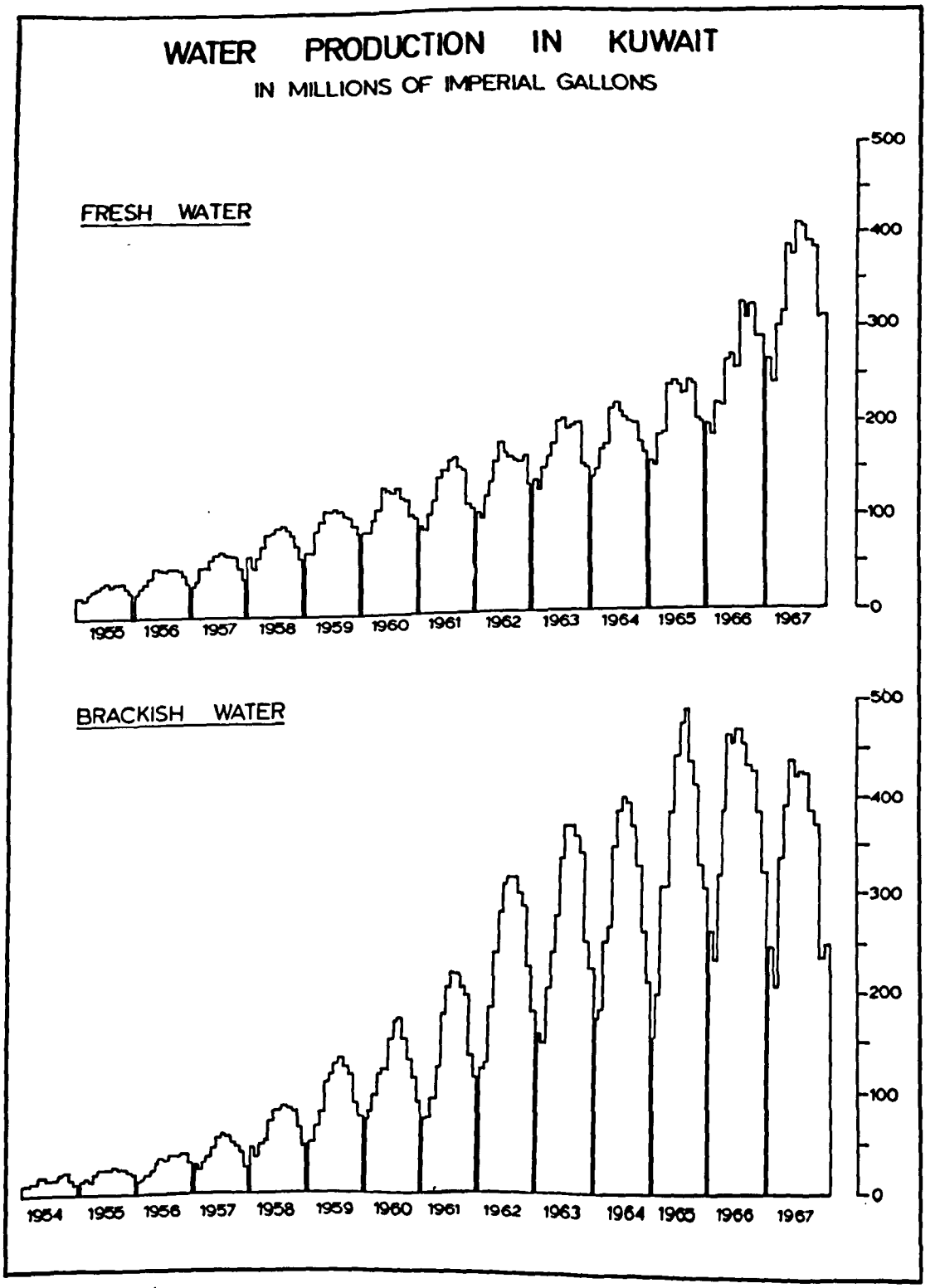

WATER PRODUCTION IN KUWAIT
IN MILLIONS OF IMPERIAL GALLONS
FRESH WATER
500
400
300
200
100
0
1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967
BRACKISH WATER
500
400
300
200
100
0
1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967

Figure 2.3

Although the search for fresh water continues, particularly in west Kuwait, Raudhatain, the largest fresh water reservoir so far encountered, supplies only 4 million gallons per day - a rate which can be sustained for 20 years. A significant development is the plan to lay a water pipeline from the Shatt al-Arab to Kuwait. The contract with Iraq was signed in 1964 and an international panel was appointed in 1965 to supervise the implementation of the agreement to supply Kuwait with 120 million gallons daily. Seventy million gallons of this were earmarked for agriculture (Planning Board, 1966, p.15). For political and other reasons, however, work has not begun on the pipeline.

IV. POWER

Kuwait has an immense surplus of energy: last year's oil exports alone totalled 122.1 million tons, equivalent to approximately 50,630 million therms (Table 4.1). Within Kuwait the major energy source is natural gas which is produced as a by-product of oil. In 1966, 455,353 million cubic feet of gas was produced of which only 100,313 million cubic feet could be used (Planning Board, 1968, Tables 1 and 4). Gas under pressure is used to generate electricity and to distill sea water in large dual-purpose plants at Shuwaikh and Shuaiba. In 1966 annual production of electricity exceeded 1,000 million kilowatts compared with a production of only 87 million ten years earlier. This electricity is sold for 2 fils per kilowatt - an almost negligible amount - resulting in a very high per caput consumption, especially

in mid-summer when air-conditioners are in widespread use.

V. AGRICULTURE

Lack of rain and underground water, coupled with high evapo-transpiration rates, severely circumscribes agricultural activities in Kuwait. Recent attempts to extend cultivation to Kuwait are a noteworthy addition to the traditional pastoral economy.

a) Farmers

Field cultivation was until recently almost unknown in Kuwait. Early this century Jahra (Fig. 2.1) was the only village with enough water to produce even dates and jit (a form of alfalfa). Lorimer (1915, p.897) recorded only 2,000 date palms. Some of the villages in the east coast had a few date palms but from the very earliest period Kuwait has been a net food importer.

In recent years steps have been taken to ease this heavy reliance on imported food - particularly vegetables and milk. A Government-sponsored experimental farm was established in 1953 and now covers 40 hectares on the southern perimeter of Kuwait City. Initially it produced trees and shrubs for Kuwait's parks and traffic islands, but now it has sections dealing with poultry, a dairy, and a nursery. Salt resistant strains are being tested and evolved on the farm (Ministry of Guidance, 1963, pp.154-5).

A new departure is the establishment of a large-scale hydroponics section in association with several Japanese experts brought to Kuwait as part of a contract with the Japanese-owned

Arabian Oil Company. A soil survey of Kuwait is in progress (by Societé Centrale pour l'Equipment du Terretoire) but, as in other Gulf states, the limiting factor in agriculture remains water and not soil (see Bowen-Jones et al, 1968, for details of the Trucial States). The relative insignificance of agriculture in Kuwait is brought out by the statistics of the 1965 Establishment Census; only 559 workers were engaged in any form of agriculture in Kuwait (Establishment Census, 1965, Vol.1, Table 5). These workers contributed only 0.4 percent of the total Gross Domestic Product formation in 1965-6 (Planning Board, 1967, Table 3).

b) Nomads

In 1957, 15,679 desert dwellers or Badu were recognized in the Census (1957, Table 1) compared with 6,187 in 1965 (Table 1). Lorimer (1915, p.1074), at the beginning of the century, put the numbers of desert dwellers within Kuwait territory at 13,000. While these Badu are subject to large enumeration errors because of their constant movements across international boundaries, the figures reflect a generally accepted trend. The Badu population is being gradually reduced and, with it, the production of livestock and livestock products.

Exports of sheep, goats, and camels were important up to World War II, but since then have dwindled to very low levels. In 1966, exports of livestock were worth less than K.D. 2,000, and the Planning Board estimated that less than one-tenth of Kuwait's meat supplies were met from the desert herds (Economic Survey, 1967, p.17).

VI. FISHING

a) Pearling

As Blegvad and Loppenthin showed in 1944, the fishing resources of the Gulf are considerable, but it is for pearls rather than fish that the waters of the Gulf have been traditionally farmed. Lorimer's account of the pearl industry before oil remains the most authoritative although many authors have described the industry since (Strong, 1940; Alexander, 1948; Bowen, 1951; Dickson, 1956; Berreby, 1959).

In 1905-6, Lorimer estimated the value of the pearl catch for the whole Gulf at £1,434,399 at the very lowest (Lorimer, 1908, p.2220). Kuwait's income from pearling he put at 134,700 Indian Rupees. The industry as a whole occupied 9,200 Kuwaitis in 461 boats (Lorimer, op.cit., pp.2256-2262). In the inter-war period pearling suffered a serious setback, not only because of the severe depression of the European markets, but also because of the advent of the Japanese cultured pearl. Some recovery occurred in the post-war period, but today the industry has dwindled into insignificance.

b) Fishing

Besides the catches of fish landed locally by small fishing boats, three large commercial companies are responsible for most of the fish landed by value. All three companies fish for prawns which are then frozen and flown to North America and Europe. Operating since 1959, the Gulf Fishing Company operates

63 vessels of which 59 are trawlers. The Kuwait National Fishing Company has 42 boats and two mother ships, while the International Fishing Company has two mother ships and 10 trawlers.

While fishing is important as a means of industrial diversification, the industry in 1965 occupied only 1,258 men (Establishment Census, 1965, Table 94).

VII. INDUSTRIES

Kuwait lacks manufacturing industry either on the bazaar level or as an organized factory system. Lorimer noted an absence of craft industry 60 years ago and only recently, with the sizeable resources of cheap power and chemical feedstock, has some attempt been made to combine these elements in a chemical industry. A petro-chemical complex is being created at Shuaiba in south Kuwait, including an oil refinery with a throughput of 95,000 barrels per day in 1968. The Kuwait Chemical Fertilizer Company will eventually be producing daily 400 tons of ammonia, 550 tons of urea, 400 tons of sulphuric acid, and 510 tons of ammonium sulphate. As a by-product of sea water distillation, the Shuwaikh plants produced 4,100 tons of sodium chloride, 700 tons of chlorine, 725 tons of caustic soda, and 103 tons of hydrochloric acid in 1966 (Statistical Abstract, 1967, Table 95).

Two other industries are associated with the building trade. The first, the manufacture of sand-lime bricks in 1966 produced 49 million bricks. The second, manufacture of unslaked lime, produced 1,320 tons in 1966.

Kuwait has no other manufacturing industries of note, with most of the employment opportunities in the service and food processing industries. In 1965 over half of the labour force were employed in Government and services (Table 2.3).

Table 2.3 1965 CENSUS OF EMPLOYMENT : DISTRIBUTION OF THE LABOUR FORCE BY MAIN ECONOMIC ACTIVITIES

	Total	Agriculture & Fishing	Mining & Quarrying	Transformative Industries	Building & Construction	Electricity & Water	Trade	Transport & communications	Government & services	Others
Kuwaitis	100	1.4	3.4	4.5	3.1	4.1	12.8	6.6	63.5	0.6
Others	100	1.0	4.1	11.6	19.8	3.8	12.9	5.3	41.0	0.5

Further, as Table 2.4 illustrates, manufacturing contributed only a tiny proportion (under 4 percent) to the Gross Domestic Product in both 1965-6 and 1966-7.

Table 2.4 PERCENT CONTRIBUTION OF THE VARIOUS SECTORS TO THE GROSS DOMESTIC PRODUCT

Sector	1965-6	1966-7
Agriculture and fishing	0.3	0.4
Mining and quarrying	63.4	61.5
Industry	3.2	3.5
Construction	4.3	4.8
Electricity, water, and gas	2.1	2.3
Transport, storage, and communication	2.8	2.8
Wholesale and retail trade	8.0	8.1
Finance, insurance, and real estate	0.8	0.9
Housing	4.7	4.8
Public administration and defence	5.5	5.8
Services	4.9	5.2
Total	100	100

Source : Planning Board, 1968, Table 8,
in : Economic Survey, 1966-7.

Virtually all other sectors are dwarfed by the mining and quarrying division, with industry contributing only 3 percent to the Gross Domestic Product.

CONCLUSION

Kuwait's resource base is both difficult and narrow. Few states have such severe climatic regimes and such serious

problems of water shortage. Economic opportunities have thus been more restricted than in other states of the Levant and North Africa, so that for these reasons Kuwait's economic history has followed a course different from that of the Middle East's as a whole. The Bay of Kuwait and the State's strategic location at the head of the Gulf are the principal physical assets on which Kuwait in history has been forced to capitalize.

CHAPTER THREE

FACTORS INFLUENCING KUWAIT'S URBANIZATION :

2. ECONOMIC HISTORY AND PHASES OF URBANIZATION

In the previous Chapter the physical environment and resource base were described. These elements are essential ingredients in the economic development of a nation, and are fundamental to the evolution of its spatial organization, including the evolution of cities. In this present chapter the two aims will be to show how these elements have been dynamically incorporated in the process of economic development, and to identify phases of prosperity and urbanization in Kuwait.

I. ECONOMIC HISTORY

a) Early History

Little specific information is available on Kuwait's economic life prior to the late eighteenth century. A surprising amount of information, however, has been collected on the Gulf in general before this date. As a waterway linking Mesopotamia with the Indus valley, the Gulf was the scene of some of the earliest known voyages in the pre-Christian era. Greek and Roman trade was substantial just before and immediately after the time of Christ (Wilson, 1959, pp.18-55) but the only evidence of its effect on Kuwait comes from the find of Greek coins, artifacts, and public and private buildings on the island of Failaka at the entrance to Kuwait Bay (Ministry of Guidance, 1956;

Glob, 1959; Glob, 1960; Glob & Bibby, 1960). Previously most of these small trading communities were thought to have been located along the Persian shore, but recent archaeological work is suggesting that the offshore islands of Arabia also shared in this early phase of sea-borne commerce (Glob, 1956 and 1957).

With the establishment of the Abbasid Caliphate in Baghdad in A.D.750, trade with the Orient - India and the Far East in particular - began. Much of the coasting trade followed the Persian shore of the Gulf for, in successive periods, emporia such as Siraf, Qais, and Hormuz achieved widespread renown for their size and prosperity (Wilson, op.cit., pp.92-109). The mariners of the Arabian shore probably shared to some extent in this trading prosperity, for several of the Arab geographers of the period mention Bahrain as a prosperous city and island. Nasir-i-Khusran, for example, visited Bahrain in A.D.1051 and referred to its pearl industry and its flourishing date gardens (quoted in Wilson, op.cit., p.89). In the thirteenth century Ibn Batuta described Bahrain as "a fine and considerable city, with gardens, trees and streams" (quoted in Wilson, op.cit., p.91). References by other writers to tribal instability and feuding along the Arabian coast at this period suggest that commerce was only a thin veneer overlying the traditional Badu economy (Wilson, op.cit., Chapters 3 and 4).

Little more can be said of Kuwait and its environs at this period; the Portugese phase of commercial monopoly in the sixteenth century, followed by the expansion of the activities of the British East India Company, largely passed Kuwait by. Once again the entrepot ports engaged in the maritime commerce were situated on the Gulf's Persian shore or around the coasts of Muscat. It seems unlikely, therefore, that at this period Kuwait consisted of more than a small and insignificant fishing village.

b) The 'Utub settlement in Kuwait

Kuwait's fortunes took a turn for the better when at the beginning of the eighteenth century members of the Bani 'Utub tribe from central Arabia settled in Kuwait because of drought conditions in the interior (Dickson, 1956, pp.26-8). Settling around the small fort or "kut" from which Kuwait takes its name (Abu Hakima, 1965, p.48), the 'Utub began to exploit their position by consolidating their friendship with the Bani Khalid through matrimonial alliances (Abu Hakima, op.cit., p.43). With the Bani Khalid's established trading connections, the 'Utub were able to expand both seaborne and caravan trade. The first 50 years of Kuwait's foundation were marked by a "high degree of prosperity" as a result (Abu Hakima, op.cit., p.65; Lorimer, 1915, p.1001).

While commercial prosperity in the Gulf as a whole was at a low ebb during the second half of the eighteenth century due to the Turkish-Persian rivalry, the Persian Civil Wars, and an

upsurge of piracy, Kuwait fared well because of the Persian occupation of Basra. In Lorimer's words :

> "A noteworthy consequence of the Persian occupation of Basra was the migration of a number of merchants to Kuwait and the removal of others who did not feel themselves secure even there, from Kuwait to Zubara in Qatar. The trade and general growth of both Arab seaports was strongly stimulated by these events ...." (Op.cit., pp.146-7).

Although the occupation lasted only 4 years between 1775 and 1779, it had a lasting effect on Kuwait "of which the prosperity at this time was considered to stand in an inverse ratio to that of Basra". The British mails from India were landed at Kuwait, and between 1793 and 1795 the British factory was moved there despite the complaints of its staff that the supply of water was "infamously bad in quality being at once salt, sweet and bitter".

Seldom mentioned until Stoqueler's visit to Kuwait in 1831, the city in 1820 possessed "an armed population of between 5,000 and 7,000 men" giving it a total population of well over 10,000. Niebuhr's visit to Kuwait in the 1770s fills a much needed gap in our knowledge and marks the first of several European travellers who visited and described Kuwait. At the time of this visit Kuwait contained 10,000 people who owned 800 small boats and who lived by trading, pearling, and fishing :

"Mais dans les plus grandes chaleurs de l'année, lorsque la plûpart son auprès de Bahrain, et que d'autres vont à Baghdad et à Haleb, et autres lieux y vendre des chameaux pour les caravanes. Il n'y a pas dans la ville de Koueit ou Gran plus de 3,000 personnes" (Niebuhr, 1774, p.295).

Trade, by the time of Stocqueler's visit in 1831, amounted to 600,000 Maria Theresa dollars, 500,000 dollars in imports on which the Shaikh levied a duty of two percent (Wilson, op.cit., p.250). Apart from this levy, there was little other government interference in the activities of the merchant community. In 1831 the Kuwaitis are said to have owned 15 large ships called "baghlahs", 20 smaller ships ("battils") and about 150 smaller craft. Some of these were involved in the pearl fishing industry of which the total value was one million Bombay Rupees for the whole Gulf in 1800 (Lorimer, 1915, p.164). Bahrain was the main pearling centre, however, and Kuwait prospered as a centre for smuggling goods into Turkish Iraq as well as a means of conveying the plunder of the Qasimi pirates from Bahrain to Persia (Lorimer, 1908, p.166 & p.1007). Troubles in Hasa also contributed to the flow of goods through Kuwait. At this time camel trains leaving Kuwait could reach Baghdad in 30 days and Aleppo in 80; the charge per camel load of 700 lbs. was between 90 and 130 rupees (Lorimer, 1915, p.167).

Kuwait apparently grew in status throughout the nineteenth century although direct sources of information are scattered and thin. Palgrave, although he never visited Kuwait personally, wrote this second-hand description of the city at mid-century :

> "Among all the seamen who ply the Persian Gulf, the mariners of Koweyt hold the first rank in daring, in skill, and in solid trustworthiness of character. 50 years since their harbour with its little town was a mere nothing; now it is the most active and the most important port of the northerly Gulf, Aboo-Shahr hardly or even not excepted. Its chief, Eysa, enjoys a high reputation both at home and abroad, thanks to good administration and prudent policy; the import duties are low, the climate is healthy, the inhabitants friendly, and these circumstances, joined to a tolerable roadstead and a better anchorage than most in the neighbourhood, draw to Koweyt hundreds of small craft which else would enter the ports of Aboo-Shahr or Basra .... In its mercantile and political aspect this town forms a sea outlet, the only one for Jabal Shammar, and in this respect is like Trieste for Austria." (Palgrave, 1868, p.386).

c) The Beginnings of British Involvement

Kuwait remained an insignificant tiny Shaikhdom throughout the second half of the nineteenth century. Towards the end of the century, political events in the surrounding territories drew Kuwait first within the Ottoman sphere of influence after the Najd expedition of 1871 (Kumar, 1965, p.137), and then within the British.

One of the first intrusions of the outside world into Kuwait began in the 1870s when the British India Steam Navigation Company steamers began calling at Kuwait. The service was suspended as Kuwait's prosperity was thought to be prejudicial to that of Basra and it was not until 1901 that a regular weekly service began with Kuwait. Kuwait's status within the Ottoman Empire was never entirely certain since the Shaikhs retained a degree of autonomy while accepting the Ottoman title of "Qaimaqam" over the territory as a confirmation of their succession. British policy in the lower Gulf, while aimed at suppressing piracy and the slave trade at sea, had been to avoid interference with internal affairs on the Arabian mainland throughout the nineteenth century (for further details of this policy see Belgrave, 1966; Moyse-Bartlett, 1966; and Wilson, 1959).

Two acts drew British attention to Kuwait towards the end of the nineteenth century; the first was Mubarak's fratricide and seizure of control in Kuwait, followed by growing acts of piracy in the Shatt Al-Arab by Arabs apparently under Mubarak's

suzerainty (Kumar, 1965, pp.137-8; Wilson, 1959, p.252). At first, wishing to hold the Ottoman Porte responsible, the British performed a remarkable political volte face when Count Kapnist, a Russian subject, applied to the Porte in 1898 for permission to build a railway from Tripoli in Lebanon through Baghdad and terminating in the Persian Gulf at Kuwait (see Kumar, op.cit., Chapter 5, for details). Shaikh Mubarak was promptly asked to sign an Exclusive Agreement in 1899 promising not to "receive the Agent or Representative of any power or Government at Kuwait ..... without the previous sanction of the British Government; and he further binds himself, his heirs and successors not to cede, sell, lease, mortgage, or give for occupation or any other purpose any portion of his territory to the Government or subjects of any other power ....." (Aitchison, 1933).

Originally conceived to oppose Russian expansion in the Gulf, the Agreement proved equally effective in thwarting German plans to construct a railway terminal in Kuwait, for which purpose a German survey team reached Kuwait in 1900.

Growing British involvement in the Gulf prompted the despatch of J.G. Lorimer of the Indian Civil Service to the Shaikhdoms on the Arabian shore, who produced his monumental two-volume "Gazeteer" in 1908 and 1915. For the first time detailed information is available on Kuwait's history, population and economic life, and for this reason it is possible to trace Kuwait's economic development in the twentieth century with remarkable accuracy.

d) Kuwait in the early 20th Century

With expanding trading connections and a forceful leader in Shaikh Mubarak, Kuwait was prospering in the early years of this century. In Dickson's eyes Kuwait became "to the Arab mind, a most attractive place to live in and the population of the town had nearly doubled itself" (1956, p.153). Most of the credit for this prosperity goes to Mubarak ruling between 1896 and 1915, "who really raised Kuwait from a place of little importance to a flourishing principality". Mubarak was responsible for the provision of customs and warehousing facilities which were instrumental in increasing trade, but his demands for higher import duties and a tax from householders on his lands caused dissatisfaction locally.

Lorimer provides the first accurate information on Kuwait's economic life. He wrote :

> "Pearl fishing is the premier industry of the Persian Gulf; it is besides being the occupation most peculiar to that region, the principal or only source of wealth among the residents of the Arabian side. Were the supply of pearls to fail, the trade of Kuwait would be severely crippled while that of Bahrain - it is estimated - would be reduced to about one-fifth of its present dimensions ...."

Despite minor fluctuations in the nineteenth century, the value of the annual catch for the whole Gulf rose from £300,000 in the

1870s to £1,076,973 in 1904-5. Bahrain was responsible for most of this catch, however, as Table 3.1 shows :

Table 3.1 VALUE OF THE PEARL CATCH BY PRINCIPALITIES IN 1905-6

Principality	Value of catch in rupees
Bahrain	12,603,000
Trucial Oman	8,000,000
Lingeh	695,861
Kuwait	134,700
Masqat	22,500

Source : Lorimer, 1915, p.2253.

But in Kuwait 9,200 men were involved in pearl diving, prompting Lorimer to remark : "The lower and middle classes of Kuwait almost all live by seafaring occupations, such as fishing, pearl diving, and the coasting trade ..."

Local industries were confined to shipbuilding and the service and handicraft trades. All the materials for ship-building were imported - the ribs from Karachi, the nails from India, and the rope and fibre from Calicut. Altogether 300 carpenters were employed in the production of 20 to 30 vessels annually. In addition, Lorimer provides an inventory of craftsmen, shopkeepers, and merchants. From this compilation it is apparent that Kuwait was involved in a sizeable entrepot

trade with Najd, Mesopotamia, and India, and was prospering in its role as the only port serving Najd which was not under Turkish control. For this reason arms were the most valuable import in 1905-6. Again, of Mubarak's estimated income of 399,000 Maria Theresa dollars, the largest single item was the revenue from the sea customs amounting to 150,000 dollars.

Kuwait continued to develop on the basis of its overseas trade and income from pearling up to World War I. In 1909 a branch of the American Arabian Mission was opened in Kuwait, staffed by qualified doctors. Dr. Calverley (1950) of the Mission described pearl diving as "the chief industry of the place" although about this time the long-distance carrying trade (described by Dickson, 1956, pp. 461-469; Villiers, 1958; and Al-Duaij, n.d.) was probably growing in significance.

While Kuwait prospered on the traditional industries such as pearling, fishing, and maritime commerce, the lack of indigenous natural resources laid the State open to the foibles of international politics. Despite British attempts to control the lucrative arms traffic in the Gulf Kuwait, amongst other Gulf ports, was deeply involved in the supply of arms and supplies to both sides during the First World War. Thus, in 1918, the Royal Navy enforced a sea blockade on Kuwait, the first of several embargoes which severely curtailed Kuwait's trade and prosperity. Further, during the 'Ikhwan rebellion in Arabia, 'Ibn Sa'ud was concerned about the supplies reaching his opponents through Kuwait so that he too enforced a strict blockade on trade between Najd

and Kuwait between 1923 and 1937. Dickson (1956, p.277) describes this period for Kuwait as"a long-drawn-out fourteen years' agony" and Freeth (1956, p.33) characterizes the period as one of "economic ruin". Fraser's report (1911, p.102) provides an excellent contrast by describing the pre-blockade period thus :

> "Koweit is growing rapidly and has spread far outside its old walls. Its trade is steadily increasing and the Sheikh is waxing rich. He is reputed to be able to put 10,000 - 15,000 fighting men in the field".

Despite British attempts to have the Sa'udi embargo lifted, Kuwait's economy remained in the doldrums until 1937. Threatened by the incursions of the 'Ikhwan, culminating in the Battle of Jahra in 1920 and the rapid construction of the city wall in 1920, Kuwait was faced with a major economic crisis due to the intrusion of the Japanese cultured pearl onto the world markets coupled with the financial crises in Europe and North America in the late 1920s and early 1930s. In December 1934 Shaikh Ahmad signed a salutory document; the Agreement granting a concession to explore for oil to an Anglo-American concern, the Kuwait Oil Company. Despite the payment of dead rents and the discovery of oil at Burqan in 1938, the Second World War ushered in a further period of economic hardship for Kuwait. Oil operations were suspended between 1942 and 1945 because of lack of supplies and trade was interrupted by the

occupation of many of the Gulf ports by the British as a measure to protect their supply lines to Russia and the Turks. As Table 3.2 shows, direct employment by the Kuwait Oil Company was initially very small so that the economy was little affected until after the end of the Second World War.

Dickson remained in Kuwait during the War to oversee the oil company's installations in Kuwait. His remarks are a telling reminder of how Kuwait's prosperity from the earliest period recorded has depended heavily on trade and external contacts :

> "It (wartime) was a difficult time for everyone, especially the poor of the town and in the desert, for food, clothing, and medicines were almost unobtainable, and great distress prevailed ..... my wife and I managed privately to import by sailing boat from Persia a hundred pairs of grinding-stones we issued to the starving Badu of the hinterland (one set to every ten tents) to enable them to grind barley which we also bought for them ..... At that time there was practically no wheat or flour in the town, rice was terribly scarce, and the price of dates had reached a starvation level." (1956, pp.450-451).

With the end of hostilities in 1945 further drilling and oil production was quickly resumed, so that by June 1946 Kuwait exported its first shipload of oil. While revenue payments remained small until the 1950s, direct and indirect employment by K.O.C. rose rapidly, as Table 3.3 shows :

Table 3.2 KUWAIT OIL COMPANY STRENGTHS 1936 - 1949

Strength as at :	Number	Labour Grades
31st December 1936	260	Mostly manual labour
1937	172	with very few "staff";
1938	201	i.e. skilled
1939	257	expatriates.
31st December 1946	1,552	Mostly manual labour
1947	5,057	initially, with a
1948	8,753	growing number of
1949	6,700	staff.

Source : Kuwait Oil Company, Public Relations Dept., London, 12th February 1969, pers.comm.

Phases of prosperity in Kuwait have been associated with the period when international trade in the Gulf area has been at its height. Throughout the period up to 1946 Kuwaitis relied heavily on external contacts and were prepared to maximise their major natural resource - their geographical location.

II. PHASES OF URBANIZATION

Kuwait's economic development is not a history of steadily increasing wealth and prosperity. The State's dependence on the entrepot trade of the Gulf and eastern Arabia laid it doubly vulnerable to political and economic factors largely

beyond Kuwait's control in both maritime and territorial realms. Just as the prosperity of the merchant community and its dependents in Kuwait saw successive periods of comfort and security and then hardship and unease, so too did the growth of the city survive periods of growth and stagnation. While the exact connections between economic development and urbanization are currently under review (Sovani, 1964; Kamerschen, 1967-8), the Kuwait situation until recent years was conveniently simple to allow the generalization that phases of economic prosperity are contemporary with phases of economic growth. Several factors bear this out :

1. Until 1950, natural increase of population was negligible in Kuwait (see Chapter 6). Hence all demographic growth prior to this date can be attributed to migration.
2. Kuwait never possessed a rural agricultural population so that "push" factors from the countryside are largely irrelevant to Kuwait's urban growth. At most, rural - urban migration amounted to the settlement of the Badu in the city at certain phases. Most of the early twentieth century influx of population apparently took place from East Africa and Persia (Lorimer, 1908, p.1051).
3. Kuwait has throughout history been the sole centre of importance in the Shaikhdom. Sub-centres and villages in Kuwait are of little importance until the post-1950 period, so that the great majority of the urbanization was focussed in Kuwait City.

4. Finally, there is documentary evidence of the historical connection between the growth of Kuwait City and the level of economic activity in the Gulf (Lorimer, 1908 and 1915; Palgrave, 1868; Niebuhr, 1774; Wilson, 1959; etc.).

Overall, three distinct phases of heightened economic activity and rapid urban growth, alternating with two phases of economic stagnation and slower urban growth, can be distinguished (Table 3.3).

Beginning with the establishment in Kuwait of the 'Utub in 1716, Kuwait grew rapidly in its first 50 years of existence. Niebuhr's contemporary report confirms the Arabic source material cited in Abu Hakima (1965). A further spur to rapid urban growth was provided by the Persian occupation of Basra and the diversion of much of Basra's trade to Kuwait. Phase 2 saw a slackening in the pace of development when Kuwait is rarely mentioned in the contemporary Western literature. Overseas commerce and pearling provide a steady if rather vulnerable base for development throughout the period. Estimates suggest that between 1770 and 1870 the population of Kuwait roughly doubled (Table 3.4).

With Shaikh Mubarak's accession a phase of more active economic activity and rapid urban growth began. In the 30 years up to 1908 the population doubled itself. Both the British and Sa'udi blockades severely curtailed commerce in Kuwait, but urban growth was given a boost by the migration of tribesmen to Kuwait

City in the face of threats by the 'Ikhwan, particularly in the 1920s. This phase of economic recession in the inter-war period, relieved only by illegitimate activities such as piracy and smuggling (of arms and gold especially), finally ushered in the present period of very fast urban expansion pursuant on the beginnings of oil exporting in June 1946.

CONCLUSION

Chapters 2 and 3 have dealt with factors relevant to Kuwait's phases of urbanization up to the present day. Chapter 2 dealt with the fixed elements - Kuwait's physical environment - while Chapter 3 demonstrated how this endowment affected the area's subsequent history. In particular, Kuwait's dependence on external rather than internal resources has resulted in phases of growth alternating with periods of stagnation. In this, Kuwait has been the victim of the circumstances of its neighbours - a trend with remarkable historical continuity and relevance to the contemporary situation.

This last chapter has shown that Kuwait's urbanization up to 1946 was in many ways typical of better known trading cities such as Damascus (al-Shams) and the cities of Iran located along the Silk Road. By 1946 it is clear that a distinctive community had evolved in Kuwait united by its commercial moves but typical of many "city states" of Asia and Europe in the later Middle Ages. In the succeeding chapters part of the task will be to examine the transformation of these elements in the evolution of the present city in its new satellite towns and villages.

Table 3.3 PHASES OF URBAN GROWTH IN KUWAIT 1700 - 1969

Phases of urban growth	Dates	Character of period	Authorities
Initial phase of rapid urban expansion	1716 - 1766	Establishment of Kuwait by 'Utub. Trade links with Najd fostered by Bani Khalid alliances	Lorimer, 1915 Dickson, 1956 Abu Hakima, 1965 Niebruhr, 1774
	1775 - 1779	Persian occupation of Basra. British mails and factory in Kuwait	-do-
Slow but steady urban growth	1790 - 1870	Steady urban growth based on furtherance of trading links and expansion of pearling	Lorimer, 1915 Abu Hakima, 1965 Kelly, 1968 Stocqueler, 1831 Palgrave, 1868
Period of hastening urban growth	1870 - 1915	Piracy and smuggling added to conventional activities of trading and pearling. Political and economic expansion under Mubarak 1896 onwards	Lorimer, 1908 & 191 Kumar, 1965 Kelly, 1968 Wilson, 1959 Fraser, 1911
Little urban expansion until 1940s	1915 - 1945	Slow growth and economic hardship occasioned by Saudi & British blockades. Collapse of pearl market in inter-war period. Some urban growth as a result of tribal hostilities, especially 1919-20.	Dickson, 1956 Al-Duaij, 1962 Admiralty Handbook, 1944 Freeth, 1958
Very rapid urban growth	1945 -	Urban explosion began in the 1950s. First sizeable urban expansion outside Kuwait City	Dickson, 1956 Shiber, 1964

Table 3.4 POPULATION ESTIMATES FOR KUWAIT DERIVED FROM VARIOUS SOURCES

Date	Population	Notes	Authority
1716		Kuwait established by influx of 'Utub.	Abu Hakima, 1965, p.26.
1766		Decreased slightly by departure of al-Khalifa section to Qatar.	Kelly, 1968, pp.32-3.
1774	10,000		Niebuhr, 1774, p.295.
1820	5,000 - 7,000	Armed men	Lorimer, 1915, p.1006.
1831	4,000		Stocqueler
1878	17,500	Retrospective estimate	Lorimer, 1908, p.1050.
1908	35,000	Excluding 13,000 Badu	Lorimer, 1908, pp.1051 & 1074.
1911	10,000 - 15,000	Fighting men	Fraser, 1911, p.102.
1916	30,000 - 40,000	Possibly higher : over 3,000 houses counted	Admiralty War Staff, 1916, Vol.2, p.400.
1930s	60,000		Freeth, 1958, p.41.
1944	70,000		Admiralty Naval Intelligence, 1944, p.149.
1945	100,000		Freeth, 1958, p.41.
1952	160,000		Dickson, 1956, p.40.
1953	250,000		-do-
1957	206,473		First Census of Population

CHAPTER FOUR

KUWAIT'S POST-WAR ECONOMIC DEVELOPMENT

INTRODUCTION

Between 1946 and the present day Kuwait's economy underwent a rapid transition from the traditional trading and pearling economy described above to a much more complex economic stage. Kuwait, it would seem, has passed through a kind of "Industrial Revolution" compressed into just over 20 years which brought it in standards of living and overall prosperity equal to those of Western Europe. In this Chapter the truth of this assumption will be criticised, for while Kuwait today superficially resembles a post-Industrial Revolution country such as Great Britain with, for example, metalled roads, electricity, and high standards of domestic housing and sanitation, the State almost completely lacks manufacturing industry. Certainly Kuwait has undergone an economic and social "revolution" in recent years, but it is not a revolution familiar to students of the type-cast model of Western Europe.

Kuwait's contemporary internal prosperity and international significance both hang on the country's role as a major exporter of crude oil. In 1966-7 93 percent of the State's total income was directly derived from oil revenues and most of the rest from sources indirectly associated with the oil industry (Statistical Abstract, 1967, Table 74). A year earlier the Planning Board estimated the value added by industries in

Kuwait (excluding oil) to the Gross National Product at no more than 3 percent of the total (Planning Board, 1967, p.13). Yet in 1965 less than 4 percent of the employment lay in the mining and quarrying category of economic activities. By contrast over 68 percent of those gainfully employed in that year were involved in the provision of services - electricity, gas and water, commerce, transport and communication, and other services (Census of Population, 1965, Table 7). Hence an apparently anomalous situation has arisen where most of the money and foreign exchange needed to run the State is derived from a sector (the oil industry) which directly provides only a tiny proportion of the total employment, while most of the employment opportunities are provided in the tertiary sector, itself making only a very small addition to the national wealth. How this situation has developed will be considered in detail below.

I. THE COURSE OF ECONOMIC GROWTH

Detailed statistics on industry and employment are unavailable until the first Census of Population was taken in 1957. Older residents remember the period with some clarity while early Bank reports and other scattered sources (e.g. Dickson, 1956; Duaij, 1962) provide some useful background material. From these sources it is clear that while oil exporting began in June 1946 little tangible change overtook Kuwait's economy until the early 1950s. Ship-building remained the most notable domestic industry until quite recently (I.B.R.D., 1965, pp.61-2),

and both commerce and pearling retained their salient position in the immediate post-War years. Gold smuggling was important as a source of foreign exchange and was significant enough to result in the banning of all Kuwaiti citizens from India in 1947 (Duaij, n.d., p.33). By 1949, however, the Imperial Bank of Iran was able to report :

> "The development of oil in the area (Kuwait) is transforming the lives of the inhabitants of these barren lands ....." (Annual Report, 1949).

Henceforward the oil industry was financially dominant in Kuwait's economic growth. Increasing sums were spent by the Government on the construction of houses, roads, schools, hospitals, electricity and water supplies, sewerage schemes, airports and commercial docks. This lavish disbursal of the oil revenues led to a certain amount of private conspicuous spending while providing the major impetus for Kuwait's subsequent surge forward. Growing demands for labour led to a massive influx of foreign labour (see Chapter 5 for details) which was required in quantity to meet the demands of the construction industry, and in quality to meet the growing needs for technicians and skilled administrators.

Initially almost every commodity required in Kuwait had to be imported. Gradually the import and export business grew in significance and several personal fortunes were made in this early period. Previous trading experience (see Chapter 3)

left the Kuwaitis with sufficient business acumen to handle the growing import - export trade successfully. In 1951 the Imperial Bank of Iran noted :

> "The prosperity of Kuwait continues to grow .... the growing resources of the State derived from the oil royalties are being applied to the general public welfare ..... The merchants of Kuwait have had a satisfactory year." (Annual Report, 1951).

Despite this commercial evolution the fabric of Kuwait City remained virtually unaltered for some time, as the first air photographs of 1951 show (Fig.7.5). In the subsequent year, however, British Consultants prepared a Master Plan for Kuwait's future growth and initiated a period of construction and reconstruction which continues today (see Chapter 7 for details). As part of the construction programme, and also to facilitate the transfer of funds from the public to the private sector of the economy, the Government began to buy up land in the Old City at deliberately inflated prices. The effects of this policy on urban development are traced in Chapter 7, but at this stage it is sufficient to point out that this disbursal of money, amounting to over K.D. 58 million by 1957, and to ten times that amount by 1967 (Government Information Bulletin, 16th March 1968, p.10), led to an efflorescence of the consumer-orientated industries, especially retailing.

In the early 1950s the speed of development was so fast that demand outran supply, producing inflation and a minor trade recession. By 1954 the British Bank of the Middle East reported that the "pace of development was now more in keeping with the physical possibilities" (Annual Report, 1954), and a year later that "the rise in standards of living was now more apparent." This period marks the beginning of what in other contexts has been called by Rostow the stage of "high mass consumption" when Kuwait's main industry became the provision of services on a massive scale. To examine further this critical period it is of prime importance to assess the growth and organization of the oil industry which supplies the foreign exchange for all other sections of the economy.

II. THE OIL INDUSTRY

a) Production and Growth

After the end of the Second World War, shut-in wells were quickly placed in production and the first cargo of oil left Kuwait in June 1946. Further exploration and drilling raised production rapidly, amounting to over 200 million barrels in 1951, doubling by 1955 to over 400 million barrels, and again by 1964 to 842 million barrels (Table 4.1). This very rapid start to oil production is in part due to favourable physical factors in Kuwait (such as the location of the high-yielding Burqan field 8 - 10 km. from the coast), and also to other geological factors. External factors are of prime importance

Table 4.1 OIL PRODUCTION IN MILLION AMERICAN BARRELS AND REVENUE IN KUWAITI DINARS 1946 - 1968

Year	Kuwait Oil Company	American Independent Oil Company	Arabian Oil Company	Total Production	Revenue Million K.D.
1946	5.9			5.9	
1947	16.2			16.2	
1948	46.5			46.5	5.0
1949	89.9			89.9	
1950	125.7			125.7	4.0
1951	204.9			204.9	6.0
1952	273.4			273.4	20.0
1953	314.6			314.6	59.9
1954	347.3	3.0		350.3	69.2
1955	398.5	4.3		402.8	100.0
1956	399.9	5.8		405.7	104.3
1957	416.0	11.6		427.6	110.1
1958	509.4	14.7		524.1	127.3
1959	504.8	21.1		525.9	167.3
1960	594.3	24.9		619.2	159.5
1961	600.2	29.3	3.8	633.3	167.0
1962	669.3	34.4	10.9	714.6	173.3
1963	705.5	35.6	24.1	765.2	190.6
1964	774.8	35.5	31.8	842.1	206.2
1965	791.9	36.5	33.1	861.5	217.6
1966	830.5	29.6	46.5	906.6	231.7
1967	836.7	24.8	50.9	912.4	241.8
1968	N.A.	N.A.	N.A.	967.1	N.A.

NOTES : i. From 1960 onwards payments shown are for financial and not calendar years.

ii. The American Independent Oil Company's production amounts to 50 percent of all oil produced in the Neutral Zone.

SOURCES :

i. Revenue from Ministry of Oil & Finance, Kuwait, personal communication.

ii. Production from Ministry of Finance & Oil, 1965, The Oil of Kuwait.

iii. Early revenue payments (up to 1953) from I.B.R.D., 1965.

in Middle East oil production and Kuwait was fortunate that as her oilfields came on stream world demand for oil was steadily rising. The Anglo-Persian dispute of 1951-4 was a cogent factor in accelerating Kuwait's offtake, just as the Suez Crisis of 1956 and the June War of 1967 both caused slight halts in the rate of production increase (Table 4.1). Lubell (1963) describes these events in detail.

Despite this rapid start in production revenues increased at a slightly slower pace initially (Table 4.1). Up to 1951 only K.D. 15 million (K.D.1 = £1 up to November 1967) had been paid directly to the Kuwait Government. However, the Kuwait Oil Company's demands for labour were steadily increasing up to 1958; since that date they have declined slightly (Table 4.2). The employment of well over 7,000 individuals throughout the 1950s was an important factor in the expansion of the Kuwait economy as a whole at this crucial period. At present, direct oil company employment is dwarfed by employment in other sectors (see above), but employment provided in the exploration and early production phases was significant in beginning the spiral of rising demands for goods and services.

b) Oil Company Organization

In spite of early exploration and subsequent finds North of Kuwait Bay, the nucleus of the oil industry remains in South Kuwait, revolving around the Company town of Ahmadi and the loading terminals at Mina' al-Ahmadi and Mina' Abdulla.

Table 4.2 KUWAIT OIL COMPANY STRENGTHS 1950 - 1968

31st December	STAFF			PAY-ROLL EMPLOYEES			TOTAL
	Arabs	British & other non-Arabs	Total	Arabs	Indians, Pakistanis & others	Total	
1950	145	1513	1658	4042	2223	6265	7923
1951	133	1592	1725	3567	1444	5011	6736
1952	168	1724	1892	3953	1409	5362	7254
1953	152	1827	1979	3896	1438	5335	7314
1954	143	1729	1872	3552	1787	5339	7211
1955	119	1694	1813	3677	1684	5361	7174
1956	124	1754	1878	4072	1711	5783	7661
1957	214	1917	2131	4354	2553	6907	9038
1958	321	2052	2373	4419	2644	7063	9436
1959	316	2047	2363	4102	2633	6735	9098
1960	356	1875	2231	3604	1423	5027	7258
1961	499	1647	2146	2784	1356	4140	6286
1962	498	1512	2010	2496	1247	3743	5753
1963	556	1387	1943	2499	1211	3700	5643
1964	674	1210	1884	2510	1041	3551	5435
1965	794	1082	1876	2481	931	3412	5288
1966	919	1025	1944	2419	801	3220	5164
1967	1001	968	1969	2440	694	3134	5103
1968	1176	928	2104	2472	703	3175	5279

Source : Kuwait Oil Company, pers.comm., 12th February 1969

The Kuwait Oil Company (K.O.C.) was first to produce oil in Kuwait and it still retains the lion's share of production (Table 4.1) despite the addition of the American Independent Oil Company's ("Aminoil") production in 1954 and the Arabian Oil Company's production in 1961. Both these newer companies produce in the Neutral Zone, the latter from an offshore concession. A fourth company, the State-owned National Petroleum Company, was formed in 1960 to undertake exploration and production in its own right; as yet, its main task is the local retailing of oil products from K.O.C.8s refinery, augmented since 1967 by a supply of its own refinery products from Shuaiba (Fig.2.1).

None of the oil companies retain more than a handful of office staff in Kuwait City. Much of the significance of oil developments in Kuwait is based on this decentralization tendency which oil discoveries in south Kuwait have had on the pattern of population distribution. Both Ahmadi and the expanded coastal village of Fahahil (Fig.2.1) are the first sizeable agglomerations of people in history to be located outside Kuwait City. Further industrial development at Shuaiba and a scheduled new town development called Sabahiya (see Chapter 7) will both accentuate this decentralization tendency established by early oilfield exploitation. Apart from this effect on population distribution, the role of the oil industry in Kuwait has been to provide the necessary capital for the efflorescence of a variety of administrative and service industries functionally divorced from the activities of the oil sector.

III. OTHER INDUSTRIES

a) Employment

Kuwait lacks traditional handicraft industries such as carpet-weaving or metal-working as in several Iranian and other Arab cities. Instead, Kuwait throughout history has concentrated on the provision of commercial and "professional" services (e.g. warehousing and pearl-broking) associated with its role as an entrepot port. It was not difficult for its merchants to replace these newer aspects of the import-export trade without initiating any other activities such as manufacturing. Kuwait's small home market and low import duties are effective barriers to large-scale industrialization.

Before the oil boom Kuwait had a sizeable proportion of its population employed in services. Lorimer's analysis indicated the presence of at least 900 retailing establishments together with an additional 250 grain warehouses. Included amongst these are several handicraft specialists (leather workers, quilt makers, blacksmiths, tinsmiths, and oil-pressers) which persist in the old suq today. However, as Table 4.3 shows, even by 1957 the structure of employment had changed beyond recognition from this and even the immediate post-War situation. Table 4.4 shows how relatively insignificant female employment is in Kuwait and illustrates the distribution of employment in the services sector in greater detail.

Table 4.3 MALE POPULATION* BY ECONOMIC ACTIVITY & NATIONALITY : 1957 AND 1965

MAJOR ACTIVITY GROUP	PERCENTAGE EMPLOYMENT					
	KUWAITIS		NON-KUWAITIS		TOTAL	
	1957	1965	1957	1965	1957	1965
Agriculture & Fishing	2.1	1.4	0.8	1.1	1.2	1.2
Mining & quarrying	4.3	3.4	7.4	4.0	6.3	3.8
Manufacturing	3.6	4.6	10.0	12.2	7.8	10.5
Construction	1.3	3.2	17.7	21.0	12.2	16.9
Commerce	14.7	13.1	7.3	13.5	9.8	13.4
Transport & Communication	5.5	6.7	3.7	5.6	4.3	5.8
Services	51.3	66.9	46.7	42.2	48.2	47.9
Not described	17.2	0.6	6.4	0.5	10.0	0.5
TOTAL	100	100	100	100	100	100
Total numbers employed	27,989	39,163	55,489	131,498	83,478	179,284

* Population aged over 12 years and excluding those unable to work.

CALCULATED FROM : 1957, Census of Population, Tables 25a & b.

1965, Census of Population, Tables 7a & b.

Table 4.4 POPULATION * BY ECONOMIC ACTIVITY, NATIONALITY, AND SEX : 1965

	KUWAITIS			NON-KUWAITIS			TOTAL		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Agriculture & Fishing	566	7	573	1408	2	1410	1974	9	1983
Mining & Quarrying	1337	12	1349	5241	402	5643	6578	414	6992
Manufacturing	1823	2	1825	16103	14	16117	17926	16	17942
Construction	1262	2	1264	27566	18	27584	28828	20	28848
Electricity, gas & water	1645	0	1645	5341	5	5346	6986	5	6991
Commerce	5115	14	5129	17769	147	17916	22884	161	23045
Transport & communication	2612	1	2613	7336	76	7412	9948	77	10025
Services	24571	948	25519	50123	6892	57015	74694	7840	82534
Not described above	232	17	249	611	64	675	843	81	924
TOTAL	39163	1003	40166	131498	7620	139118	170661	8623	179284

* Population over the age of 12 and excluding those unable to work.

Source : 1965, Census of Population, Tables 7a and b.

The Tables bring out several important points :

i) Employment in the services sector occupied half the economically active population in both 1957 and 1965.

ii) Construction is Kuwait's second major industry by employment; between 1957 and 1965 labour needs rose remarkably from just over 10,000 to almost 30,000.

iii) Services maintained their proportional hold on employment but total employment expanded more slowly than that in construction.

iv) Commerce (both wholesale and retail) was another fast-growing industry between Censuses.

v) Notably employment in mining and quarrying slipped back, marking the phase of labour-intensive oil production consequent upon the decline of exploratory drilling in the oil industry as a whole.

vi) There is a clear-cut distinction between the deployment of the indigenous Kuwaiti labour force and the immigrants - the non-Kuwaitis. Non-Kuwaitis predominate in construction and manufacturing while Kuwaitis are preponderant in the services sector. Kuwaitis have lower activity rates than the immigrants (only 35 percent of the Kuwaiti male population was economically active in 1965 compared to 76 percent of the non-Kuwaiti males; Statistical Abstract, 1966, Table 15).

vii) By status Kuwaitis emerge as the managers and employers while the immigrants are mostly employees; only 50 percent of

the Kuwaitis gave their status as employees in 1965 compared with 77 percent of the non-Kuwaitis (Statistical Abstract, 1966, Table 11).

viii) Finally, almost 20,000 Kuwaiti males in 1965 said they were "able to work but did not need to work" (Statistical Abstract, 1966, Table 11) a measure of the affluence of the indigenous population.

b) Manufacturing

Statistics on manufacturing in Kuwait are available for 1963 and 1965. Separate censuses were taken at these dates for Government and non-Government establishments and are published in Arabic. The 1965 Censuses are more comprehensive than those in 1963; the most recent publications form the statistical base of this section.

In 1965 there were 2,325 working non-Government industrial establishments (Census of Establishments, 1965, Table 1). Workers employed in these establishments totalled 14,817, giving an average figure of 6.4 employees per establishment. Only the very smallest industrial establishments are omitted from Table 4.5.

Overall only 5 types of establishment employed over 1,000 workers (transport equipment, non-metal products, bread making, metal products, and soft drink preparation). Together these activities were responsible for two-thirds (10,374) of the total employment in manufacturing in Kuwait. The metal products division involved a variety of metal-working - mostly of products

Table 4.5 MANUFACTURING ESTABLISHMENTS IN KUWAIT IN 1965

	Kind of Industry	No. of establishments	No. of persons employed
1.	Dairy and ice cream products	13	168
2.	Flour mills	1	5
3.	Bread manufacturing and cake baking	392	1729
4.	Manufacturing of sugar confectionery	16	132
5.	Ice manufacturing	5	68
6.	Soft drinks and carbonated water industries	7	1031
7.	Fishing net yarn manufacturing	3	12
8.	Footwear manufacturing	6	20
9.	Manufacturing of wearing apparel	1	7
10.	Tent weaving	30	94
11.	Manufacturing of furniture and fixtures	226	897
12.	Furniture renovating and repairing	14	31
13.	Doors, windows and building screens manufacturing	76	883
14.	Manufacture of paper products	3	22
15.	Printing, publishing and allied industries	20	411
16.	Manufacture of leather and leather products	3	13
17.	Manufacture of chemicals and chemical products	5	117
18.	Petroleum refineries	1	487
19.	Other industries relating to petroleum	3	95
20.	Manufacture of non-metallic mineral products	122	2516
21.	Manufacture and repair of metal products	165	1164
22.	Manufacture and repair of non-electrical machinery	58	192
23.	Manufacture and repair of electrical machinery and appliances	133	365
24.	Manufacture and repair of transport equipment	858	3934
25.	Manufacture of jewellery and related articles	106	221
26.	Manufacture of plastic products	1	16
	TOTAL	2268	14630

Source : Census of Establishments, 1965, Vol.1, Table 2.

destined for the housing or construction industry while the non-metal products division was concerned with the production of bricks, tiles, and pipes for the building trade. Clearly, what is classified as manufacturing in this context is almost a misnomer, for the manufacturing activities discussed above are very largely an extension of the service sector and would not normally be regarded as true manufacturing. With almost 4,000 people employed in the repair of motor cars forming the most numerous group in the manufacturing census, the basis of Kuwait's industrial classification breaks down. It seems that what are listed as manufacturing trades in Table 4.5 are little more than service industries in disguise with the emphasis placed on "repairing" rather than "manufacturing".

c) Attempts at diversification

The industries which exist in Kuwait at present cater for the local market in the production of construction materials, the maintenance and repair of goods and vehicles, or else are connedted with petroleum or gas. A few provide for simple consumer requirements - soft drinks, flour, or tailoring - but overall a tentative input - output table of the industrial sector indicates that at least 82 percent of all industrial activity is in some way based on construction demand (Planning Board, 1966, p.13).

Conscious of this disequilibrium in the economy the Government commissioned a British firm, Industrial & Process Engineering Consultants, to examine the possibilities

of establishing new industries in Kuwait. Suggestions included plants producing tyres, car batteries, fertilizers, an oil refinery, a steel plant, a petrochemical industry, ship repair yards, an aluminium smelter, textile, cement, paper, soap, and fish canning industries (Planning Board, 1964, p.8). Similar projects were put forward by a mission from the International Bank for Reconstruction and Development (1965, especially Chapter 8). As a step towards diversification the Government designated an area in south Kuwait near the old fishing village of Shuaiba as an industrial estate in 1961. Work began in the mid-1960s in building a combined power generating and water distillation plant with an output of 210 megawatts and three million gallons of water per day (I.B.R.D., 1965, p.119). In 1964 a Kuwait Chemical Fertilizer Company was formed with Government participation and began the production of ammonia, ammonium sulphate, sulphuric acid, and urea in 1966. A deep-water commercial port constructed at Shuaiba facilitates export of these products and those of the Kuwait National Petroleum Company's oil refinery which came on stream in 1967.

As part of this new drive to attract heavier manufacturing industries to the Shuaiba area of south Kuwait the Government are investing heavily in a new town called Sabahiya between Ahmadi and Mina 'al-Ahmadi (Fig.2.1) which is being equipped with all services and utilities as a dormitory

town for the new industrial zone (see Chapter 1). An industrial law was passed in March 1965 empowering the Government to provide a variety of incentives to industry, including exemption from import duties for capital goods and raw materials, tariff protection, subsidized water and power rates, and preference in Government purchases for locally manufactured products. While Kuwait's financial resources guarantee the success of these schemes in the short term, Kuwait's basic problems remain unaltered :

> "Rapid industrial development is handicapped by absence of raw materials other than crude oil and natural gas, narrow size of the home markets, high labour costs, paucity of technical, organizational, and entrepreneurial skills, and the absence of motivation to join the industrial labour force because of the open Government payroll for Kuwaitis." (Planning Board, 1966, p.13).

Despite the enormous capital investment in new industry, an estimated 42 percent of the labour force in Kuwait relies entirely on wages and salaries paid directly by the State (Planning Board, 1966, p.1).

IV. CONCLUSION

In the post-War period Kuwait's economy was revolutionized by the development of the oil industry in south Kuwait. The revenue payments from oil exports mounted steeply

and initiated a sequence of economic, demographic, and social changes which transformed the employment structure very rapidly in the early 1950s. Oil developments in south Kuwait led to a reorganization of the population distribution and a huge increase in that population's per capita wealth.

Government spending was on such a scale that two major changes took place in Kuwait. First, the Old City was expanded both vertically and horizontally in a very short space of time; inside ten years the area covered by the city increased almost ten times. Second, a massive influx of immigrants required for all levels of unskilled and skilled employment in Kuwait modified the demographic and social attributes of the Kuwait population and created an almost unique situation where Kuwait citizens by 1965 were in a minority in their own country. It is with these two elements of change - urban growth and demographic increase - that the second part of this thesis is concerned.

PART II

PHYSICAL AND SOCIAL CHANGES AFFECTING KUWAIT AFTER 1946

CHAPTER FIVE

POPULATION EXPANSION BY IMMIGRATION

Introduction

The first part of the thesis has been concerned with special factors - physical, historical, and economic - which have affected Kuwait's overall evolution, especially with Kuwait's rapid post-1945 expansion and the new industries which proliferated as oil revenues steadily increased.

Undoubtedly the services sector of the economy is crucial to Kuwait's contemporary level of prosperity. None of this post-War growth, and especially the growth in the services sector, would have been possible without population immigration on a sizeable scale. As well as providing a workforce consisting of both skilled and unskilled people, the immigrants form a significant proportion of the total consumers in Kuwait and have accounted for much of the distinctiveness of Kuwait's contemporary political and economic situation. For the immigrants, called "non-Kuwaitis" in official statistics, at present outnumber Kuwaiti citizens in their own country. In addition the immigrants in 1965 constituted 77 percent of the total employed labour force (Statistical Abstract, 1966,

Table 12). Such an extremely heavy dependence on expatriate labour (and Kuwaiti nationality is only very rarely extended to foreign immigrants) is unprecedented in the Middle East and has only a few parallels in exceptional communities elsewhere, such as Gibraltar and Hong Kong. This Chapter first reviews the statistics available on population immigration and then discusses the course of population increase by immigration from 1945 to the present day. The subsequent Chapter discusses population increase by natural means.

I. DATA SOURCES

a) CENSUS MATERIAL

Demographic statistics were unavailable in any detail for Kuwait until the first Census of Population was taken in February 1957. Subsequent censuses were taken in May 1961 and April 1965, but the fullest coverage of all aspects of the demographic data on Kuwait is provided by the Censuses of 1957 and 1965.

Table 5.1 THE POPULATION OF KUWAIT

Census Date	Kuwaitis			Non-Kuwaitis		
	Males	Females	Total	Males	Females	Total
Feb 1957	59,154	54,468	113,622	72,904	19,947	92,851
May 1961	84,461	77,448	161,909	116,246	43,466	159,712
Apr 1965	112,569	107,490	220,059	173,743	73,537	247,280

Source : Annual Abstract of Statistics, 1967, Table 9 (Arabic)

From a comparison of the data presented in the Censuses, it is clear that substantial enumeration errors are present in all three. The inter-censal increases of the indigenous Kuwaiti population (Table 5.1), equal to a natural increase rate of 8.5 percent per annum between 1957 and 1961, and to 7.2 percent per annum between 1961 and 1965, are clearly beyond the bounds of possibility. Secondly, in both 1957 and 1965 a surplus of 5,000 Kuwaiti males over females was recorded, pointing to female under-numeration. Finally, the Census of 1961 falls short of the standards of coverage and presentation displayed in the Censuses of 1957 and 1965. In 1961 definitions of enumeration areas are vague and no maps accompany the Census volume. Nevertheless, by careful translation (all 3 Censuses are published in Arabic only) and statistical checking, the Reports provide an indispensable basis for demographic analysis in Kuwait, particularly for the estimation of immigration prior to the period covered by the Censuses. Tables 50 a and b in the 1957 Census, which show non-Kuwaitis tabulated by nationality and period of residence in Kuwait, are of fundamental significance in the back projection of the growth of the immigrant population.

b) OTHER MATERIAL

Immigration is best represented by detailed arrival and departure statistics. Up to the date of final independence in 1961 these figures are unfortunately unavailable, but after this date people crossing Kuwait's borders are listed in monthly statistical reports by mode of arrival and departure and by

nationality. These statistics provide an invaluable guide to immigration but they also have their failings. Most important of these is the problem of illegal entrants. Kuwait is a tempting target for the poor and dispossessed of surrounding countries whose inhabitants often resort to illegal methods of entry when frustrated by Kuwait's immigration legislation. The volume of coastal traffic in small boats makes it impossible to exclude illegal entry into Kuwait by this method. Iranis thus find it particularly easy to reach Kuwait. When encountered by the police these illegal immigrants are quickly repatriated. Statistics on such expulsions are fortunately available on a similar basis to the arrival and departure statistics, and can thus be used to modify the latter.

Second, the nomadic Badu cross and recross Kuwait's frontiers without hindrance. These people may have no nationality or they may have several. Fortunately their numbers are relatively small, amounting to 15,679 in 1957 (Census of Population, Table 1) and 8,345 in 1965 (Census of Population, Table 1).

A variety of <u>other sources</u> are useful in the study of immigration, especially before 1957. These include reports by travellers on Kuwait's population (see Chapter 3) and comments (spoken and written, e.g. Dickson, 1956) by older residents of Kuwait who remember the early post-War period with some clarity.

II. THE COURSE OF IMMIGRATION

a) Methods of Study

Immigration, particularly immigration occurring before 1957, was approached by attempting a retrospective projection of the foreign-born population from data provided in the 1957 Census. Since Tables 50a and b list foreigners by nationality and period of residence by single years back to 1947-8, and by five and ten year periods beyond, the size and national composition of the immigrants is known at various dates back to 1917. Table 5.2 presents the results of these calculations in real numbers and Table 5.3 presents them as a percentage of the population in separate years. By this calculation a description of pre-1957 immigration by volume and composition has been evolved.

The method is, however, open to criticism on several counts as a description of pre-1957 immigration. First, it takes no account of deaths or departures of those foreigners resident in Kuwait before 1957 but who did not survive until the 1957 enumeration. Circumstantial evidence suggests that these errors may be smaller than imagined. Most of the immigrants in the immediate post-war period arrived during a phase of rapid economic expansion in Kuwait (see Chapter 4) where employment was readily obtainable and wages were well above those elsewhere in the Middle East. In addition, political upheavals in Palestine, India, and other states which were the source areas of most of the migrants reaching Kuwait combined with the opportunities for well-paid employment at all levels in the State, both acted

as strong incentives to prevent the operation of sizeable return migration.

It seems unlikely that mortality was of great importance in depleting the non-Kuwaiti population in Kuwait for several reasons. Even in 1957 the foreign population consisted largely of young men in the working age groups : five-eighths of the non-Kuwaiti population in 1957 were between the ages of 15 and 39. Amongst such a group deaths are unlikely to have been very numerous. Unfortunately no more positive statistics are available, but the age structure of this population, together with Kuwait's free and expanding health service (see Chapter 6) undoubtedly kept deaths at a low level.

Finally, the method could possibly err on the high side of the correct figure for any one year by the presence of non-Kuwaitis born in Kuwait but missed in the Census because of their youth. Subsequent studies (Chapter 6) show that under-numeration is most likely in the younger age groups, but in the 1957 Census, 81.5 percent of the immigrants were males (Table 1). With such a bias in the sexes, natural increase in Kuwait is unlikely to be very significant in altering the total numbers of foreigners in Kuwait until after 1957. In fact Table 47 shows that a mere 5.4 percent of the immigrant population (children of immigrants) were born in Kuwait in 1957. Overall, the retrospective estimation of immigration by using the length of residence tables in the first Census provides a basis for tracing the growth of the

Table 5.2 FOREIGN NATIONALS ARRIVING IN KUWAIT BY INDIVIDUAL YEARS UP TO 1957

Nationals from :	NUMBERS ARRIVING IN Before 1947	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	Total Arrivals	Percent Males
Iran	1611	185	300	461	625	1345	1590	2024	3348	3795	1470	16,754	96
Iraq	2476	190	371	450	513	1426	1304	1583	1999	2415	2361	15,088	77
Jordan	665	59	113	139	268	813	1827	2457	2125	3201	1476	13,143	82
Lebanon	299	6	22	45	100	319	632	912	1011	1565	1294	6,205	81
Oman	917	96	187	196	249	352	434	552	656	1141	849	5,629	93
India	744	257	215	197	77	211	462	382	397	427	380	3,749	73
Pakistan	354	106	135	87	81	149	213	247	268	363	282	2,285	75
Syria	239	6	16	27	34	98	211	227	320	491	451	2,120	86
U.K.	99	92	141	138	118	183	250	227	204	301	200	1,953	55
U.A.R.	333	2	5	6	12	76	111	197	365	484	284	1,875	50
Others	1038	17	169	144	127	255	386	545	550	762	622	4,716	-
Total	8775	1016	1674	1890	2204	5227	7420	9353	11243	14945	9669	73,517	81

Calculated from : Census of Population, 1957, Tables 50a and b.

N.B. Statistics are for individual years from February to February since the 1957 Census was taken in that month.

Table 5.3 NATIONAL COMPOSITION OF THE FOREIGN BORN POPULATION OF KUWAIT UP TO 1957 (CUMULATIVE)

PERCENT OF THE NON-KUWAIT POPULATION

NATIONALITY	Up to 1947	Up to 1950	Up to 1953	1957 Census
Iraqi	27.9	26.1	23.8	28
Irani	18.1	19.1	21.7	21
Jordanian	7.5	7.3	13.8	16
Lebanese	3.4	2.8	5.0	7
Omani	10.3	10.4	8.6	7
Indian	8.3	10.6	7.7	4
Pakistani	4.0	5.1	4.0	3
British	1.1	3.5	3.6	2
Syrian	2.7	2.1	2.2	2
Egyptian	3.7	2.6	1.9	2
Others	12.8	10.3	7.6	8
Total	100	100	100	100

Calculated from : i) Census of Population, 1957, Tables 48 & 50a and b.

N.B. The slight discrepancy between the proportion of Iraqis in this Table and in Table 5.2 can only be explained by a reluctance of Iraqis to provide information on their date of arrival in Kuwait.

immigrant population in Kuwait, Errors are inevitable, but the nature and magnitude of many of these are for the most part predictable.

b) Pre-War Immigration

Of the immigrant population resident in Kuwait before 1938 who survived to be enumerated in 1957, 71 percent were males out of a total of 803 non-Kuwaitis in all. 507 of these immigrants were reported as arriving in the period 1928-1938. As Table 3.1 shows (in Chapter 3) employment by the Kuwait Oil Company on the preliminary surveys and exploratory drilling which began in 1935 for the "Grade C" (manual labour) category was never above 300 between 1936 and 1939. Because of the period of almost 20 years intervening between 1938 and 1957, the figure of 507 arrivals in the period 1928-1938 is probably an underestimate because of migrant turnover. Chapter 3 has indicated how little indirect employment was provided on the periphery of the oil industry until the early 1950s. Therefore, even if K.O.C. changed its entire labour force in each of the years 1936-1939, the total numbers involved would not exceed 1,000. Generalizing, it seems improbable that total immigration into Kuwait exceeded 2,000 persons in all prior to the outbreak of the Second World War.

III. CITIZENS AND ALIENS

Kuwaiti citizens and foreign immigrants are, however, poorly differentiated statistically, particularly in the early

period. As Chapter 3 has shown, Kuwait itself has only a comparatively short history; Stocqueler wrote of Kuwait's population in 1831 :

> "I was informed that the Arabs have only been in possession of the place (Kuwait) about one hundred and fifty years ....." (1832, p.19).

Kuwait's involvement in overseas and overland trading meant that the city consisted of a cosmopolitan blend of races and nationalities at an early date. Lorimer provides a description of the population composition at the beginning of the twentieth century. He remarked that while most of the city's population belonged to eight tribes from Arabia, the population comprised 100 households from Nājd, over 1,000 Persians, 100-200 Jews, and at least 4,000 Negroes, totalling 35,000 people in all (Lorimer, 1908, pp.1051-2). Hence, before the oil boom began, at least 16 percent of Kuwait's population were not indigenous residents of the area.

Clearly little significance was attached to nationality in Kuwait until after the end of the Second World War. Then, with growing immigration challenging the position of older residents, a nationality code became necessary. A series of laws and Amiri Decrees were issued between 1948 and 1965 in an attempt to clearly separate Kuwaitis and foreigners. Initially, Kuwaitis were regarded as people and their offspring who had been permanent residents since 1899 (Law number 2, 1948, Article 2). Citizenship could be obtained by marriage with a Kuwaiti husband (Article 10) or by permanent residence in Kuwait for at least 10 years.

A further Decree in 1959 altered this Law slightly by defining Kuwaitis thus :

> "Kuwaitis are basically those people who inhabited Kuwait before 1920 and have continued to reside there until the date of publication of this law. Ancestral residence is considered complementary to that of offspring." (Amiri Decree No.15, 1959, Article 1, translation).

Naturalisation conditions became more stringent, insisting on 15 years continuous residence in Kuwait (8 for Arabs) together with a knowledge of Arabic and freedom from criminal convictions. This Article was further amended in 1960 in the Amiri Decree No.2 when other Arabs had to be permanently resident in Kuwait for 10 years instead of 8. Finally, the amendment to Article 4 limited the total number of naturalisations to 50 in any one year, effectively making the attainment of Kuwaiti nationality impossible for almost all the foreign residents in Kuwait.

In conclusion, it appears that confusion between Kuwaitis and immigrants is inevitable in the pre-War period, but thanks to Kuwait's stringent nationality laws in force since 1948, the distinction between the indigenous population and later immigrants is relatively easy to draw in the post-War era. Fortunately, the bulk of Kuwait's immigrants did not arrive until this latter period.

IV. WAR-TIME IMMIGRATION

Between 1937 and 1947 the number of immigrants in Kuwait increased sharply, especially in the 5 year period 1942 - 1947. Dickson describes wartime in Kuwait as a period of difficulty for everyone (Chapter 3). It seems unlikely that immigration was significant during this period, but as soon as hostilities ended and oil exports began in 1946 a flood of arrivals apparently reached Kuwait. Confirmation of this is available in the retrospective calculations based on Tables 50a and b in the 1957 Census.

Table 5.4 NUMBERS AND COMPOSITION OF MIGRANTS TO KUWAIT UP TO 1947

Nationality of immigrants	Percent Nationality Composition				
	Before 1917	1917-1927	1927-1937	1937-1942	1942-1947
Iraqi	17	10	17	22	29
Irani	48	48	42	37	22
Omani	2	10	13	16	17
Sa'udi	21	20	18	12	7
Indian	1	1	1	3	5
Pakistani	1	1	3	2	5
Others	10	10	9	8	14
TOTAL	100	100	100	100	100
Numbers involved	144	152	507	879	2,785

Calculated from : Census of Population, 1957, Tables 50a and b.

Table 5.4 shows that up to 1947 citizens of the neighbouring Arab countries - Iraq, Iran, Oman, and Sa'udi Arabia - were the most numerous nationalities in Kuwait. K.O.C.'s needs were primarily for manual labour which were satisfied largely from Iran and from the Badu. Between 1937 and 1942 the Irani population, renowned for its willingness to undertake arduous manual tasks shunned by other Arabs, doubled in size. Towards the end of the period, ending in 1947, the composition of the immigrant population showed a series of significant changes. Apparently Kuwait's riches and opportunities had become sufficiently well known to attract immigrants from beyond the countries bordering on Kuwait. Indians and Pakistanis began to arrive in growing numbers as did Arabs from the Levant (Lebanon and Syria). In part this can be explained by the Oil Company's recruiting efforts in Beirut and Bombay aimed at introducing artisans and workers for more specialized tasks into Kuwait. Recruiting offices were maintained in Beirut and Bombay until the mid-1950s (K.O.C., 1969, personal communication).

Nationality is not an infallible guide to the social characteristics of the immigrants reaching Kuwait; there are, however, obvious distinctions between the educational status of, for example, Britons and Iranis in Kuwait. With the rapid post-War increase in immigration, contrasting socio-economic groups within the same nationality grew up in Kuwait. Iranis, for example, who today form most of the manual labour force in Kuwait, also comprise a small, prosperous and influential merchant class

based on a few families who are long-established residents of Kuwait. Indian traders too, who composed a small but prosperous merchant class in the Gulf ports before the last War (Landen, 1967, pp.143-4), are now outnumbered by the hundreds of clerks and foremen employed by the oil companies, although the Indian community still maintains its supremacy in sections of the cloth and clothing business in Kuwait.

The oil boom, while it resulted in a sizeable increase in immigration from a greater variety of source areas than before, also attracted to Kuwait different social and economic groups from the same source area. This aspect of the immigration pattern will be considered more fully below.

V. POST-WAR IMMIGRATION

After 1947 the immigration population expanded rapidly : a total of 93,000 were enumerated in the Census of 1957. In this decade statistics derived from the retrospective estimates are of greater reliability because of the relatively short period intervening between the dates of immigration and subsequent enumeration in 1957. Tables 5.2 and 5.3 describe the course of this immigration by nationalities in numbers and percentages.

Broadly, the statistics in these tables confirm the circumstantial evidence presented in Chapter 4 that the main phase of economic expansion and hence population immigration did not begin until the early 1950s. Since the Census was taken in February 1957, statistics do not conform to calendar years, but

between 1950-51 and 1951-52 the number of migrants in Kuwait more than doubled. A further doubling took place between 1951-52 and 1953-54, followed by proportionately smaller but still sizeable increases up to 1957. Incomplete census enumeration led to a discrepancy of 28,209 between the enumerated total of non-Kuwaitis and those providing length of residence information in 1957. Hence, while the proportion of migrants arriving in any one year vis a vis other years is correct, actual numbers may be about one-third too low in every instance.

During the decade 1947-1957 a radical change took place in the national composition of the migrants in Kuwait. Just after the War most of the immigrants were Iraqis, Iranis, and Omanis - unskilled labourers from countries which had long-established contacts with Kuwait. Subsequent arrival statistics (Table 5.3) indicate that while immigration from Iraq and Iran continued at high levels, Palestinians and Jordanians, Lebanese, Egyptians, Britons, and other Europeans were arriving in increasing numbers. The change is especially sharp after 1951 when Palestinians in particular began to arrive in increasing numbers annually (Table 5.2). By 1957 the five most numerous foreign groups were Iraqis (26,035), Iranis (19,919), Jordanians and Palestinians (15,173), Lebanese (6,829), Omanis (6,380), and Syrians (2,145).

Initially, the first migrants reaching Kuwait were almost all males; a retrospective calculation based on Table 5.2 shows that 76 percent of the 1950 alien population were males.

Even in 1957 over 80 percent of the Irani, Iraqi, and Omani populations were males. While this male preponderance remained high amongst later migrants (82 percent of the 1947-1957 residents were males - Table 5.2), the figure was being reduced steadily up to the 1965 Census. Females increased from 27 percent of the non-Kuwaiti population in 1957 to 42 percent in 1965. One of the most significant factors in this balancing trend in the sex ratios of the non-Kuwaitis is the rising proportion of people from beyond the Gulf area. As Table 5.2 shows, there are wide national variations in the proportions of males in the 1947-1957 residents. People from outside the Arab world display more evenly balanced sex ratios than those from within it. Egyptians are a notable exception to this rule since the U.A.R. provided Kuwait with the bulk of its female school teachers. Asians (Indians and Pakistanis) had a male bias in their populations intermediate between the Arab and the European figures. As a general statement it is apparent that a relationship exists between the level of employment obtained in Kuwait by a migrant and his willingness to bring his wife or other dependents to Kuwait. Well-paid established positions are awarded to the highly educated and technically skilled; accommodation may be provided, thus acting as a strong incentive for migrants to bring their families to Kuwait. Overall, therefore, there is a fairly clear relationship between evenly balanced sex ratios and high status employment, and vice versa, in Kuwait. Europeans tend to fall into the former category and Gulf Arabs in the latter, with Asians and educated Arabs in between.

VI. FACTORS INVOLVED IN IMMIGRATION

So far, immigration has been discussed without referring to causes of this large international movement of population. Despite scanty information in the source areas of migrants in Kuwait (Census tables show only a migrant's nationality - not his place of birth or last town of residence), enough evidence is available from other sources to suggest factors relevant to immigration. The permanency or otherwise of immigration to Kuwait is an important topic which will not be discussed here but in a later section.

First, within Kuwait, there are several important "pull" factors :

(i) Kuwait offers well-paid employment at all levels for people with a great variety of skills.

(ii) In addition, the State provides free education and a free health service, both with standards well above the average for the Middle East as a whole. There facilities are open to all non-Kuwaitis.

(iii) Kuwait's low import duties make products of foreign origin seem relatively cheap in Kuwait. Luxury goods such as radios, televisions, cameras, cosmetics, and other luxury goods, are thus readily available to the immigrant, perhaps denied them in their own country by protective tariffs.

(iv) The service bias of Kuwait's economy (Chapter 4) enables a migrant with the minimum of technical training to obtain a job in, for example, Government administration or its ancillaries.

Similarly, there are several well-defined "push" factors in the home areas of the immigrants :

(i) Overall, levels of prosperity in the Middle East are below those prevailing in Kuwait. This is particularly true of neighbouring areas such as southern Iran and southern Iraq.

(ii) A study of national Censuses shows (Chapter 1) that there is a regional drift of population from rural to urban areas. Kuwait City plays a part in this trend, not only in the settlement of the Badu in Kuwait, but also in the movement of rural dwellers from other states to Kuwait City. Detailed studies are lacking, but the most recent Jordanian Census (taken in 1961 and published in 1964) shows that 50 percent of the Jordanian population living abroad are resident in Kuwait. Of these 31,739 people, 21,628 were from the Nablus area (Jordan, Census of Population, 1964, Vol.1, Table 5.2). This district is undoubtedly a rural area. Conversations with anthropologists working in Iran (Brooks & Marsden)

suggest that the bulk of the Persian immigrants in Kuwait are also from rural source areas. Azeez (1968) also has some important information on Iraq.

(iii) Wider political forces are also at work in causing large-scale movements of people to Kuwait. Most significant among these is the establishment of Israel in 1948 and its subsequent expansion over most of what was Palestine. Obviously this expansion is the most important factor in causing the increase in the number of Palestinian and Jordanian arrivals in Kuwait after 1950 (shown in Table 5.2). Indian independence in 1948, and the war with Pakistan, is also an important factor in increasing Asian immigration to Kuwait. Major changes of Government and several coups d'etat in the neighbouring countries were also instrumental in hastening immigration into Kuwait.

(iv) A further factor in the determination of the source area of the migrants has been the growing maturity of the Kuwait economy as a whole. Initially, manual labourers were in most demand; now demands are higher for the literate and technically skilled. Such a change in emphasis may be in part responsible for the growing numbers of Jordanians (16 percent illiterate

in 1965), Lebanese (17 percent illiterate), and Syrians (26 percent illiterate) arriving in Kuwait compared with Iranis (81 percent illiterate) and Iraqis (67 percent illiterate).

Taken together these factors provide a reasonably comprehensive view of causes of migration to Kuwait although, of course, the subject requires a much more detailed field enquiry.

VII. THE ALIEN POPULATION 1957-1965

Demographically this period is well documented with three Censuses in a space of eight years. The Censuses indicate that the non-Kuwaiti population increased by more than two and a half times between 1957 and 1965. Comprising 45 percent of Kuwait's population in 1957, immigrants grew to form 53 percent of the total in 1965. Assuming even enumeration at all three Censuses, the rate of immigration was slightly slower in 1961-1965 than between 1957 and 1961.

Besides this overall increase of the immigrant population the period was distinguished by several significant trends in the character of the alien population.

1. Between 1957 and 1965 the numbers of women arriving in Kuwait rose sharply. In 1957 there were only 274 non-Kuwaiti women per 1,000 non-Kuwaiti males. By 1961 the figure had risen to 374, and by 1965 there were 423 females per thousand males.

2. Associated with this increase in non-Kuwaiti women was an increase in the numbers of young children. By 1965 14.6 percent of the non-Kuwaiti population were under the age of 5, compared with less than 7 percent in 1957.
3. Over the same period the proportion of male illiterates declined from 42.9 percent to 32.7 percent in 1965, pointing the way towards a growing sophistication in the migrant stream. From being an almost exclusively male manual labour force up to 1957, the non-Kuwaiti population by 1965 had taken on the appearance more of a settled population accompanied by its usual dependents - females, the very young, and the very old.

These trends are observed for the non-Kuwaiti population as a whole. However, the immigrant population is by no means a homogenous group. In order to clarify the important demographic changes overtaking this population between 1957 and 1965 national groups have been distinguished, and their age and sex structures represented in a series of pyramids (Figs. 5.1 - 4). Unfortunately, the 1961 Census presents statistics on age and sex in such a form as to make comparison with the other Censuses almost impossible; as a result, only the Censuses of 1957 and 1965 are used in this comparison.

a) SEX RATIOS

Broadly, the predominance of males declined between 1957 and 1965 for most nationalities. Possibly exceptions include the Iranis and the Omanis. Both these groups are highly mobile (see

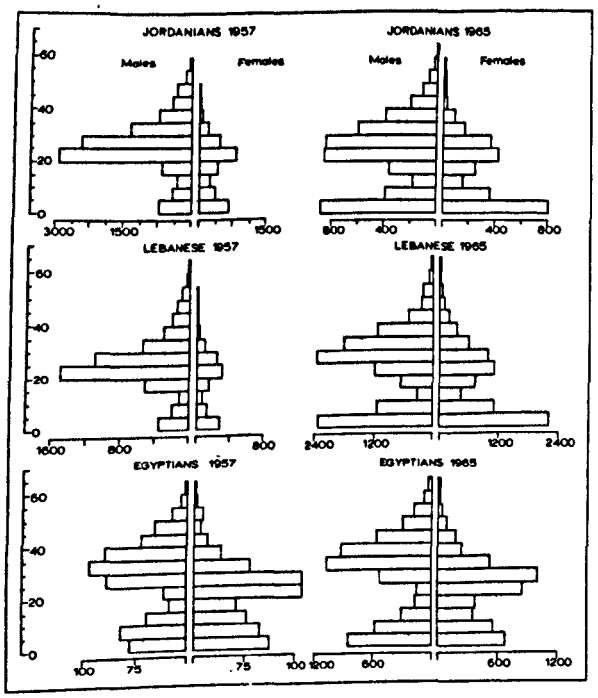


Figure 5.1

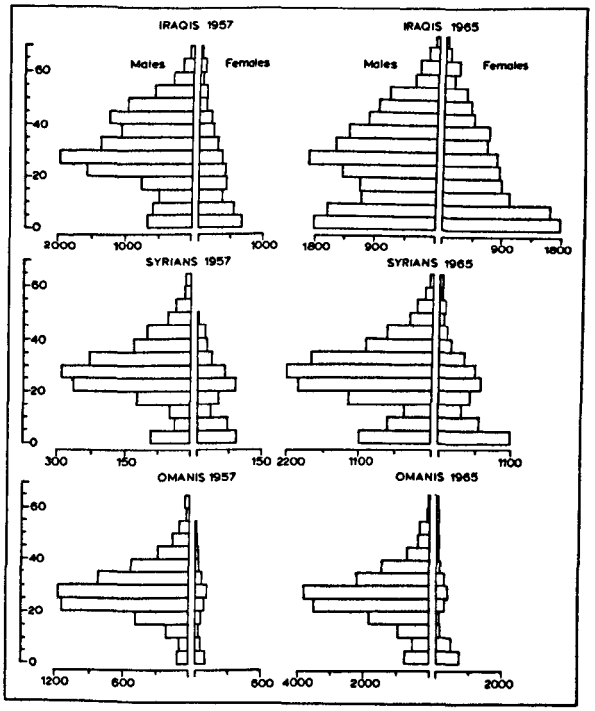


Figure 5.2

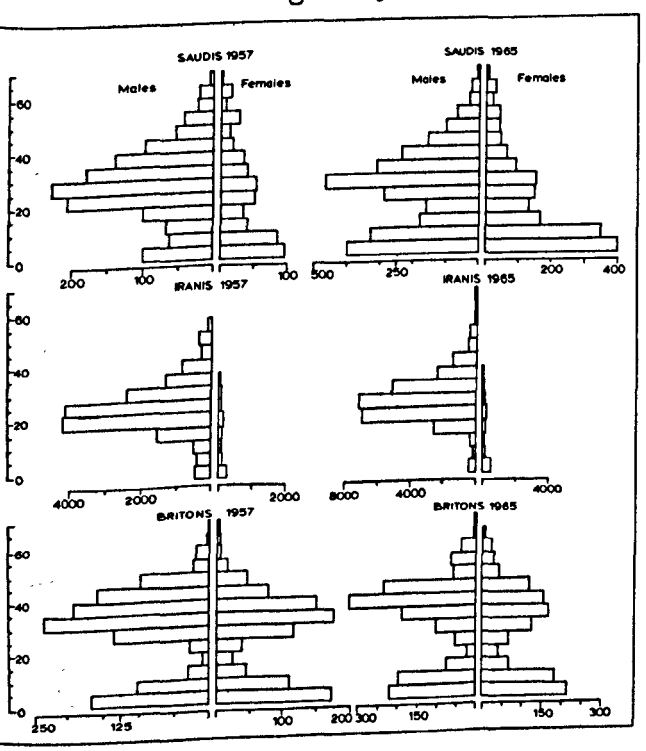


Figure 5.3

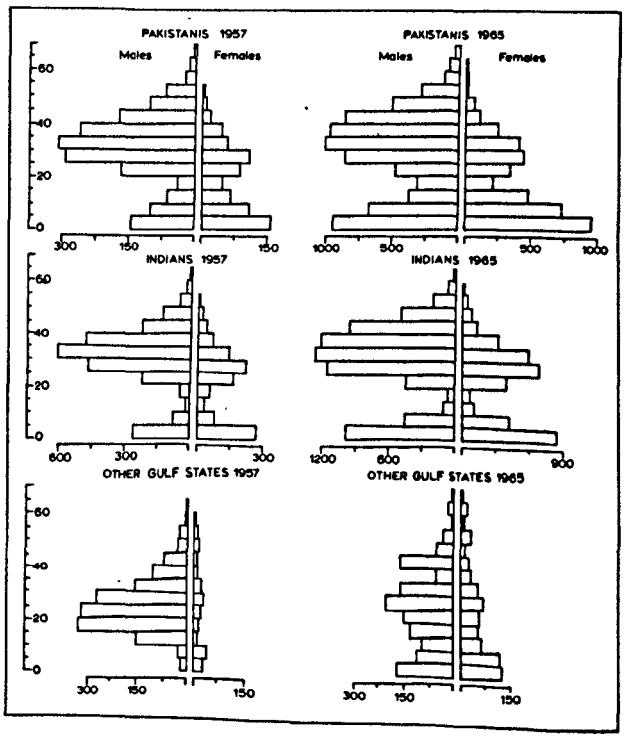


Figure 5.4

AGE - SEX PYRAMIDS FOR 12 NATIONALITIES

below), making frequent return trips to their home area; the latter are known for their pattern of migratory hawking in the Gulf ports.

Four major classes of sex ratios are recognisable in the population pyramids.

(i) The first class includes those national groups with over 70 percent male populations in 1965. Groups with such high proportions of males are the Iranis (94 percent), the Omanis (86 percent), the Syrians (72 percent), and people from the Trucial States and Qatar.

(ii) Indians and Pakistanis, the main representatives of Asian migrants in Kuwait, had closely similar sex ratios; in 1965, 66percent and 65 percent of their respective populations were males.

(iii) In the third group were included most of the migrants from the Arab area as a whole, with between 61 and 64 percent males in their population. These nationalities - Jordanians, Sa'udis, Lebanese, and Iraqis - all increased their proportion of females between 1957 and 1965 (Figs. 5.1 - 3).

(iv) The last group with almost even proportions of males and females consisted of Europeans and Britons, Americans, and, surprisingly, Egyptians, all with less than 55 percent

males in their populations. While the age-sex pyramid for Britons balances by age group, for the Egyptian pyramid the peaks of the male and female populations are separated by approximately ten years (Fig. 5.1). As stated above, the U.A.R. provides Kuwait with many of its female teachers, many of them single girls, which is why overall sex ratios for Egyptians are almost evenly balanced.

b) AGE STRUCTURE

Almost all the age-sex pyramids (Figs. 5.1 - 4) have a "waisted" appearance because of the lack of adolescents of both sexes in the foreign-born populations in Kuwait. In addition there are very small proportions of the aged. Both these groups have good reasons for remaining in the home country - the first for schooling, and the latter because they have passed the active age range.

Most of the nationalities nave a fairly large proportion of young children, with the exception of the Iranis, the Omanis, and people from the other Gulf states. There three groups are the most masculine populations in Kuwait, as well as paying frequent visits home (see below). Despite the high proportion of males in the active age group (20-45), dependency ratios have dropped sharply since 1957. In 1957 adults aged 15-60 outnumbered the very young and the very old by almost 5 : 1; by 1965 the ratio had dropped to 2.4 : 1.

Figures 5.1 - 4 illustrate the demographic variety of the immigrant population in Kuwait. A further aspect of immigration to Kuwait which has been mentioned above is its permanency or otherwise. Fortunately, statistics are available to check this variable by nationality.

VIII. THE PERMANENCY OF MIGRATION TO KUWAIT

To estimate the length of time spent in Kuwait by migrants of various nationalities, two sets of statistics are available.

i) Using arrival and departure figures it is possible to relate the frequency with which a national group crosses Kuwait's frontiers to the total enumerated population of that group resident in Kuwait.

ii) Alternatively, the period of residence tables can be compared in the Censuses of 1957 and 1965 and related to nationalities.

Both methods are used and discussed below. Population stability measured by the first method is compared by a "Stability Index" below, which is the 1965 nationality population expressed as a percentage of the sum of arrival and departure figures for 1965.

Table 5.5 POPULATION STABILITY IN 1965 MEASURED BY RELATING ARRIVALS AND DEPARTURES TO NUMBERS RESIDENT IN KUWAIT

Nationality	Stability Index	Nationality	Stability Index
Iranis	119	Jordanians and Palestinians	47
Pakistanis	78	Egyptians	45
Kuwaitis	78	Syrians	38
Indians	67	Gulf States	30
Omanis	63	Britons	15
Other Arabs *	49	Iraqis	9
Lebanese	47		

Average of 19 National Groups = 41

* Arabs from Yemen, Sudan, Aden and North Africa

Calculated from : Monthly Statistical Bulletins, 1965.
Census of Population, 1965, Table 2.

Such a Table has two obvious failings; it assumes 1965 was a "typical" year for arrivals and departures which a study of other years suggests it was. In addition, it fails to consider illegal immigration and emigration.

A high index indicates that the members of a national group rarely crossed Kuwait's frontiers and a low index the reverse. Apparently Iranis are the most stable group in Kuwait which other evidence strongly contradicts (see below). Iranis

cross into Kuwait by sea, entering illegally; 14,400 Iranis were deported from Kuwait for this reason in 1965 (Statistical Abstract, 1965, Table 53), ten times as many as any other nationality. Of 34,875 illegal entrants in the labour force of 1963, 30,542 were Iranian (I.B.R.D., 1965, p.25). Omanis may well be in the same category as Iranis, but otherwise the table is a fair description of migrant turnover in Kuwait. Iraqis cross Kuwait's borders very frequently because of their proximity to home. Britons are also frequent crossers of Kuwait's borders, probably because annual leave is included in most contracts which are rarely awarded for more than three years at a time. Asians, by contrast, are amongst the most stable residents of Kuwait. Distance to home and the structure of their age and sex pyramids are both probable explanations.

For the second method, period of residence tables for 1957 and 1965 are compared for the intervening period 1957-1965 at three dates. In 1950, 1953, and 1957, the population of the various nationality groups provided in both the 1957 and 1965 Censuses is contrasted by expressing the deviation between the two Censuses as a percentage error. The results of these calculations appear as Table 5.6.

In effect the Table measures those people enumerated in 1957 and again in 1965 who said they were present in Kuwait in 1950, 1953, and 1957. Some errors are inevitable, but the Table broadly confirms some points about migrant stability

Table 5.6 A COMPARISON OF LENGTH OF RESIDENCE TABLES IN 1957 AND 1965

NATIONALITY	Av. error 1957 - 1965 : % ERROR	1950 POPULATION 1957-65	1953 POPULATION % ERROR 1957-65	1957 POPULATION % ERROR 1957-65
Sa'udi	96	81	88	119
Indian	88	79	79	104
Omani	75	90	63	73
Jordanian	68	22	77	105
Syrian	63	38	68	83
Iraqi	61	62	59	62
Pakistani	55	72	83	110
Lebanese	52	21	65	70
Amviates	52	58	57	42
U.S.A.	37	60	17	35
British	36	28	39	42
Irani	32	35	32	30
Egyptian	32	18	32	46
Other Europeans	14	8	14	21
Kuwaitis	61	56	59	69

Calculated from : Census of Population, 1957, Tables 50a and b.
Census of Population, 1965, Table 24.

mentioned above. Those nationalities at the top end of Table 5.6 are believed to stay in Kuwait longest, and those at the bottom are more temporary migrants. Europeans, Britons, Americans, and Iranis all appear to be the least permanent residents - the former because of their short-term contract method of employment and the Iranis because of their proximity to home. Sa'udis, Indians, Omanis, and Jordanians seem to represent the more permanent element in Kuwait's alien population, appearing as they do at the top of Table 5.6.

The two Tables do not directly correspond because of enumeration errors and because of factors such as natural increase. Sa'udis, Jordanians, and Indians probably over-estimated their length of stay in Kuwait in 1965 (Table 5.6). Kuwaitis themselves appear to have only a medium stability because of their propensity to travel and also because of a high rate of natural increase between 1957 and 1965 (Table 5.6).

Nevertheless, the Tables are complementary to a study of age-sex distribution amongst the migrants since both the residence tables and the population pyramids illustrate the variety and complexity of the factors involved in determining the origin and characteristics of the migrants reaching Kuwait.

IX. ARRIVALS AFTER 1965

Arrival and departure statistics are published monthly by nationalities; statistics are available for three years after

the 1965 Census and are presented in Table 5.7.

Clearly, immigration is continuing at a high rate. Amongst the 10 most numerous foreign-born groups in Kuwait in 1965 Iranis alone decreased in numbers between 1965 and 1968. The sizeable influx of northern area Arabs in 1967 is directly related to the Arab - Israeli June war of that year. Notably, Jordanian and Palestinian immigration leapt to 34,300 in 1967, followed by slightly smaller increases from nations closely associated with the war zone - Syrians, Lebanese, and Egyptians. Unexpectedly, Iraqi immigration also leapt upwards, perhaps because of a more general feeling of insecurity in the Arab world as a whole. Iranis presumably returned home because of this same reason.

Between April 1965 and January 1968 the non-Kuwaiti population almost doubled. Jordanians remained the most numerous (27 percent of the non-Kuwaitis), followed by Iraqis, Syrians, and Egyptians. The June War of 1967 apparently brought about a considerable change in the composition of the immigrant population in Kuwait. Assuming that the age and sex characteristics of the new arrivals paralleled those of their countrymen enumerated in 1965, the proportion of single male immigrants will have decreased and been replaced by a more balanced family structure. Natural increase amongst immigrants is thus likely to be a much more important consideration in the future than previously thought; attention will be directed to this point in Chapter 6.

Table 5.7 NET POPULATION MOVEMENTS BY NATIONALITY FROM 1965 ONWARDS

Nationality	1965 Census Population	1965 Net Movements	1966 Net Movements	1967 Net Movements	January 1968 Population Totals	Percent 1968 Total
Jordanian	77,712	+6,847	+847	+34,288	119,694	27.1
Irani	30,790	-7,851	-1,834	-12,028	12,488	2.8
Iraqi	25,897	+5,091	+14,849	+28,956	74,793	16.9
Lebanese	20,877	-179	-915	+7,115	26,898	6.1
Omani	19,520	+255	-928	+6,182	25,029	5.7
Syrian	16,849	+1,547	+6,956	+16,471	41,823	9.5
Pakistani	11,735	+191	-942	+2,673	13,657	3.1
Indian	11,699	+8	+164	+2,771	14,642	3.3
Egyptian	11,021	+1,129	+4,066	+4,709	20,925	4.7
British	2,837	+125	+125	+630	3,717	0.8
TOTAL :	229,937	+7,163	23,596	+91,767	351,463	79.5
ALL NON-KUWAITIS :	247,280	+8,423	+29,790	+156,478	441,971	100

Compiled from : Census of Population, 1965, Table 2. Monthly Statistical Bulletins, 1965 - 1967, Tables 2 and 3.

N.B. The 1965 Census was taken in April 1965 : net movements are shown only for the succeeding 8 months of that year.

Statistics after 1968 are not as yet available in a complete form, but from a study of statistics for the first six months of 1968 it is apparent that return migration on a large scale is not taking place. In fact, between January and June 1968 the non-Kuwaiti population increased by a further 18,200 through net immigration.

CONCLUSION

This Chapter has reviewed the sources of information available on immigration since the inter-war period, and has traced the increase of the non-Kuwaiti population by direct and indirect methods. While the major increase in the Kuwait population has been by immigration, natural increase by Kuwaitis and non-Kuwaitis alike is assuming growing significance in the overall population growth of the State. Chapter 6 examines this increase in detail.

CHAPTER SIX

POPULATION EXPANSION BY NATURAL INCREASE

Introduction

Natural increase occurs in a "closed" population when the number of births exceeds the total number of deaths over a period of years. A "closed" population implies that in- or out-migration is excluded from the calculation; when both natural increase and migration are taken into account any increase in numbers is referred to as "population growth".

Immigration, as Chapter 5 has shown, is of prime significance in the overall growth of Kuwait's population. However, the indigenous population has also been expanding in the post-War period, mainly by natural increase. Migration and natural increase are significant in the population growth of the Kuwaiti and the non-Kuwaiti populations as a whole, although migration is of almost negligible importance in the growth of the former population. Sources of information are scattered up to the late 1950s, but sufficient statistics are available for the post-1945 period to describe the course of population growth, particularly natural increase and its causal factors.

I. VITAL STATISTICS IN KUWAIT

Registration of births, deaths, and infectious diseases was made compulsory in 1952, but until 1959 when a Statistical Section was established in the Ministry of Public Health records

were far from accurate. Annual reports published by the Section provide an increasing variety of statistics relevant to the vital events but, as yet, the published tables are not completely comprehensive. Medical facilities have grown enormously in Kuwait recently (see below), which has had the fortunate effect of encouraging most mothers to give birth in a hospital rather than at home. There the birth is automatically registered and subsequent mortalities carefully recorded. Deaths are not so fully documented since only a small proportion of total deaths occur in hospital. However, the speed with which burial follows death in the Arab World is an important factor in the omission of the registration of death.

In addition, deaths of non-Kuwaitis or even Kuwaitis may occur in other countries; as yet, no attempt is made to collate domestic and foreign deaths for the two populations, so that published mortality rates have only a limited validity. On the other hand, Kuwait's high quality and completely free medical services are an encouragement to non-Kuwaitis living outside Kuwait to bring their wives to the State and to have their families within its frontiers. As a result, birth rates may well be above what would normally be expected.

Besides the direct records of the vital events by the State Health Service, two further sources of information are available. First, the Kuwait Oil Company runs its own health service for its employees and dependents at Ahmadi, in all

covering a population of over 20,000. Detailed and accurate records are kept for this population.

Second, the Municipality of Kuwait maintains a burial book giving the numbers of graves dug and filled each year. Some of these records are published in the Municipality's annual reports, but together with unpublished data they provide a means of checking other mortality statistics.

Finally, the three population Censuses of 1957, 1961, and 1965 can be used in a variety of ways, if not to produce a complete life table, at least to check to some extent both mortality and natality statistics.

II. NATALITY, MORTALITY AND THE POPULATION CYCLE

Kuwait's recent demographic history closely parallels the experience of many countries of the developing world. A pattern of declining mortality rates and almost stable birth rates has been recognized during the nineteenth century in England and Wales (Cipolla, 1962) as well as in several contemporary situations (Mountjoy, 1963). The transition from high fluctuating birth and death rates to the stage of low fluctuating rates reached in advanced societies today has been called the "population cycle". Statistics available for Kuwait (Table 6.10) indicate that the stage of "early expanding" population growth has been reached in which mortality has declined to low levels (less than 20 per thousand) while the birth rate remains very high

(over 35 per thousand). As a result, a sizeable natural increase in the total population is occurring.

One of the most important elements in the lowering of the death rate of a population is the provision of modern medical care and facilities. Infant mortality, that is, deaths occurring amongst children within one year of birth, is most susceptible to rapid lowering by the application of medical care. The extension of life by the postponement of death until old age is a much slower process (Barclay, 1964, especially Chapter 5). Most of the excess of births over deaths in developing countries today arises because of the increased numbers of young children "saved" from death rather than because of increased fertility. However, since births and deaths are always associated in some way with age, the demographic characteristics of a population, as well as the scope and quality of the medical care available to it will both be potent forces in the determination of the vital rates and hence the scale of population increase.

III. HEALTH FACILITIES IN KUWAIT

a) Growth

Early this century, modern medical facilities were unknown in Kuwait although a traditional medical code was in use (Brandenburg, 1967; Calverley, 1950; Levey, 1966). An American doctor, together with several semi-trained nurses, arrived in Kuwait in 1909 as part of the Arabian American Mission

of the Dutch Reformed Church (Calverley, personal communication) and began the establishment of modern medical facilities on a small scale. By 1911, a small men's hospital had been opened, followed 8 years later by a one-storey hospital for women (Calverley, 1950). Finally, a larger hospital was opened in 1939 - the Olcott Memorial Hospital - with 34 beds, one or two doctors, 4 nurses, and 10 illiterate women helpers and servants (Calverley, op.cit.). While the Kuwait Oil Company provided a tented hospital for its employees in the pre-War period, and a more permanent clinic atMaqwa subsequently, it was not until 1954 that it opened a small clinic for wives and children of its Arab employees at Ahmadi (Dickson, 1956, p.448).

Formed in 1936, the Ministry of Health in Kuwait took over responsibilities for its citizens in the post-war period, beginning with a 100-bed hospital opened in 1949. Inside 10 years the number of beds had increased to 582 while a variety of specialist clinics have been added, notably those dealing with maternity disorders and women's diseases. Numbers of doctors employed and hospital beds available grew rapidly (Table 6.1) as the State Health Scheme expanded the scope and the quality of its service. Clinics, hospitals, and special care clinics were opened with bewildering speed throughout the 1950s; a tuberculosis sanatorium was opened in 1952, a new mental hospital in 1955, a difficult birth unit in 1953, an infectious diseases hospital was opened in 1957, and the first of many motherhood and

infant care centres was opened in 1955. A new hospital - the Sabah - supplemented the facilities of the older Amiri hospital in 1962 and special orthopaedic clinics followed. Parallel developments took place in the private medical field, with new hospitals, clinics, (and specialists to staff them), proliferating up to the present day.

Table 6.1 THE EXPANSION OF MEDICAL FACILITIES IN KUWAIT

Date	Estimated total Population	Total number of Doctors *	People per Doctor	Hospital Beds provided by the State	Private Hospital Beds
1949	-	45	-	100	34
1953	170,000?	46	3696	611	N.A.
1957	206,000	145	1421	1,322	N.A.
1962	402,000	462	870	2,600	N.A.
1966	506,000	606	835	3,002	384

* Includes doctors working privately outside the State Health system.

Constructed from : Statistical Abstracts, 1964-1968, "Health Statistics".

Ministry of Health, Statistical Reports, 1958-1966.

Ministry of Health, personal communcation.

b) Effect

Since our interest at present is not in the development of the facilities of the Kuwait Health Service per se, but rather in their demographic effects, further details of the facilities

themselves appear in Appendix 1. The foregoing account suffices in that it places the beginning of the decline in mortality - especially infant mortality - at about the time of the Second World War and possibly later. While Dr. Calverley's early mission hospital undoubtedly relieved individual suffering, it is doubtful whether it had any large-scale effect on the health of the population at large. From Lorimer's evidence it is clear that health standards were low in the early years of this century and the risk of dying very high. He writes, for example, that Kuwait possessed open cesspools for sewage in the city centre (1908, p.1050), and that cholera, bubonic plague, smallpox and malaria were all frequent and fatal visitors to the northern Gulf area (1915, pp.2517-2554). Epidemics of cholera killed 7,000 in Bahrain in 1893 and a further 1,200 in 1904 (Lorimer, 1915, pp.2517-1530). Half the inhabitants of Najaf in Iraq were killed by bubonic plague in 1881 and 400 died at Basra in 1892 (pp.2530-9). Smallpox in 1900 killed 500 in Sharja alone (p.2554). Lorimer described the inhabitants of Kuwait as "long faced, sickly, and inclined to lankiness" (1908, p.1052), possibly because of their poor health.

Small inroads were made into this pool of ill-health by the Mission Hospital and K.O.C. before 1949. Major alterations in the pattern of community health only began after the Amiri State Hospital with 100 beds was opened in 1949. Thenceforward, a steady

improvement in health was recorded until today medical standards as a whole compare favourably with those of an evolved European country.

On the basis of this evolution we can recognize several medico-demographic stages constructed from both direct statistical and indirect circumstantial evidence :

Table 6.2 STAGES IN THE REDUCTION OF THE MORTALITY RATES IN KUWAIT

Stage	Date	General mortality rate per thousand	Infant mortality rate per thousand	General characteristics of the period
1	Before 1909	25+	120+	Pre-medical stage with almost no natural increase
2	1909 - 1946	20 - 25	100 - 120	Mission Hospital; some local effect on health. Small natural increase.
3	1946 - 1950	17 - 23	80 - 100	Transition stage; State Health Scheme augments K.O.C. and Mission Hospital
4	1950 - 1955	12 - 18	50 - 70	Over 1,000 hospital beds available; maternity care begins in earnest.
5	1955 - 1969	10 - 15	35 - 45	Comprehensive health service emerges; less than 1,000 persons per doctor. Infant mortality equivalent to rates in U.K. in late 1940s.

Sources: (i) Pre-1955 data from a comparative study of other developing nations, e.g. U.N. Demographic Yearbook, 1966. Tables 14 and 17.

(ii) Post-1955 data from Ministry of Health, Annual Reports, 1957-1969.

Particularly clear is the reduction of infant mortality rates in the post-War period; in just over 20 years infant death rates were halved from 80-100 to 40 per thousand, a change which took over 40 years in England and Wales. At present, total mortality is at a rate slightly below that of the U.K. because of the youth of the total Kuwait population (38 percent under age of 15). This element - the age-structure of the population - merits attention as the second major factor affecting population increase.

IV. AGE STRUCTURE OF THE KUWAIT POPULATION

Age-sex pyramids for the Kuwaiti and non-Kuwaiti populations at the three Census dates appear as Fig. 6.1. Clearly, the two populations have quite distinct demographic characteristics. The Kuwaiti population pyramid has a roughly triangular shape indicating that it is expanding rapidly by natural increase while the non-Kuwaiti population pyramid is of a quite exceptional form. For this reason the Kuwaiti and non-Kuwaiti populations will be separately treated.

a) The Kuwaitis

With almost half of their number under the age of 15, Kuwaitis were among the "youngest" populations in the world - if not the youngest (Annual World Population Data Sheets, Population Reference Bureau, Washington, D.C.). As Table 6.3 shows, the proportion in this youngest age group has been growing steadily since 1957; by 1965 the median age of the Kuwaiti population had fallen to 14.

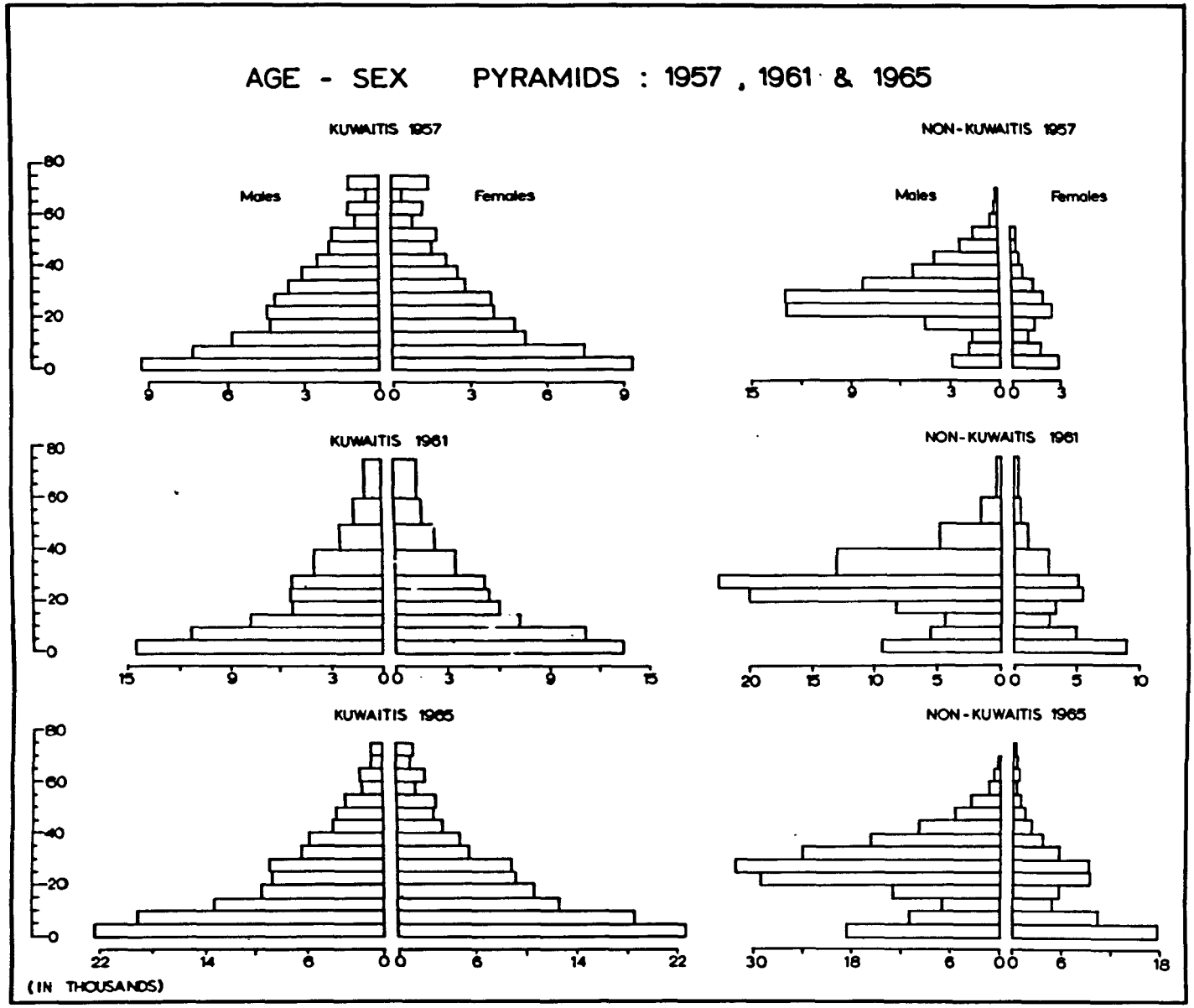

AGE - SEX PYRAMIDS : 1957 , 1961 & 1965
KUWAITIS 1957
Males
Females
NON-KUWAITIS 1957
Males
Females
KUWAITIS 1961
NON-KUWAITIS 1961
KUWAITIS 1965
NON-KUWAITIS 1965
(IN THOUSANDS)

Figure 6.1

Table 6.3 PERCENTAGE AGE DISTRIBUTION OF THE KUWAITI AND NON-KUWAITI POPULATIONS IN 1957, 1961, AND 1965

	0-14		15-39		40-59		60 and over	
Year	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis
1957	41.5	15.2	38.8	63.8	12.6	12.6	2.5	1.5
1961	43.4	23.6	32.9	63.1	11.1	10.8	5.4	1.5
1965	49.0	28.2	35.5	60.0	10.6	10.4	4.8	1.3

N.B. Totals may not equal 100 since some respondents did not state their age.

Calculated from : Censuses of Population, 1965, Table 9; 1961, Table 6; 1957, Table 3.

So marked was this increase in the proportion of children that by 1965 less than half the total Kuwaiti population was in the active age groups (15-59). Dependency ratios (the ratio between the active and inactive sections of the population) are thus extremely high and show no signs of decreasing (see natality statistics below). In general, Table 6.3 substantiates the evidence of the population pyramids (Fig. 6.1) indicating that the Kuwaiti population is undergoing a period of very rapid growth by high natural increase. The magnitude of this growth will be reviewed below.

b) The Non-Kuwaitis

The age-group 15-59 has contained over 70 percent of the total alien population in Kuwait at all three census dates (Table 6.3). Between 1957 and 1965, however, two significant related changes overtook the non-Kuwaitis. First, the numbers of women in the child-bearing age groups (15-44) almost quadrupled compared with a doubling of the numbers of Kuwaiti women in this category (Table 6.4). Thus the second change arose in the composition of the immigrant population - the proportion of children in the 0-14 age group doubled between 1957 and 1965 (Table 6.3). As other evidence suggests (see Chapter 5), the immigrant population which was initially composed mainly of young adult males searching for work in Kuwait is now taking on a more settled appearance because of the arrival of the dependents of the labour force as well as the workers themselves. High child-women ratios (Table 6.4) confirm the thesis put forward in Chapter 5 that Kuwait's free medical and educational facilities are a powerful attraction to potential migrants.

Table 6.4 THE RELATIONSHIP OF CHILDREN UNDER 5 TO THE NUMBERS OF WOMEN IN THE CHILD-BEARING AGE GROUP (15-44) in KUWAIT

	Children under 5		Women 15-44		Child-women ratio	
Year	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis
1957	18,703	5,826	20,119	8,903	930	65
1961	27,294	18,491	26,813	21,044	1,018	88
1965	44,158	36,216	42,172	35,723	1,047	1,014

Calculated from : Censuses of Population; 1957, Table 3; 1961, Table 6; 1965, Table 9.

The child-women ratio is calculated by dividing the number of children under 5 by the number of women 15-44 and multiplying by 1,000. It is a crude measure of fertility since it relates the number of survivors of 5 years of births to the average number of women capable of producing these infants. Clearly, one of the factors responsible for the growing proportion of youngsters in the non-Kuwaiti population is its high level of fertility - at present, with the Kuwaitis, one of the highest in the world (Table 6.5).

Table 6.5 CHILD-WOMEN RATIOS * IN KUWAIT WITH SOME INTERNATIONAL COMPARISONS

Country	Date	Ratio	Country	Date	Ratio
Kuwait	1961	900	Kuwait	1965	980
Libya	1964	806	India	1961	659
Morocco	1960	845	Pakistan	1961	832
Tunisia	1956	716	Iran	1956	790
U.A.R.	1960	702	Iraq	1957	936
			Turkey	1950	700
Canada	1961	535			
U.S.A.	1960	488	Denmark	1960	338
Brazil	1960	667	U.K.	1961	336
Venezuela	1961	804	U.S.S.R.	1959	695

* Calculated as a ratio of the population under 5 years of age per 1,000 female population aged 15-49.

Source : U.N. Demographic Yearbook, 1965, Table 8.

Fertility will be dealt with more thoroughly below; but the age-sex structure of a population is related to fertility. For these reasons it is of great importance to examine the differences and changes in the age-sex structures of the various national groups in Kuwait. As the age-sex pyramids show (Figs.5.1-4) the non-Kuwaiti population of Kuwait is far from homogenous.

In the Middle East young adult males are the most mobile section of the population compared to the reverse situation in Britain today. One would expect to find the age-sex pyramids of the national groups corresponding closely with that shown for the Jordanians in 1957 (Fig.5.1). Numerous factors are responsible for the departure of individual national groups from this expected norm, but first, sets of broadly similar pyramids can be recognized.

(i) Several nationalities display a strong male bias in the active age-groups together with a small number of dependents (the very young and the very old) and an even smaller number of teenagers. Included in this group are the Jordanians, the Lebanese, the Indians, the Pakistanis, and the Syrians.

(ii) A more extreme version of the first category is displayed in the pyramids for the Iranis, the Omanis, and peoples from the other Gulf States. These migrants are almost exclusively male and are probably seasonal visitors (see Chapter 5) since they have virtually no dependents in Kuwait.

(iii) Those with a more balanced distribution - roughly equal sex ratios throughout and a more "normal" proportion of dependents -

include the British and the Iraqis.

(iv) Two exceptional groups are the Egyptians and the Sa'udis. The former are older than most migrants in Kuwait and have a surplus of females in the 20-30 age-group. Sa'udis, by contrast, display an irregular distribution probably because of wrong age recording. Many Sa'udis are Badu who may have wrong concepts of their true age because of lack of documentation.

Clearly, only those groups in classes (i) and (iii) above will have high fertility rates in Kuwait. A comparison of birth rates for Kuwaitis and the immigrant groups follows below.

V. NATALITY AND FERTILITY

Recently, birth rates have shown a steady upward trend in Kuwait. As the age-sex pyramids show (Fig.6.1), Kuwaitis can be classed as a clearly "progressive" population while the factors affecting the expansion of the non-Kuwaiti population are much more complex.

a) Kuwaitis

While the total number of births to Kuwaiti women has more than tripled between 1958 and 1966 (Table 6.6), both the crude birth rate (births as a proportion of the total population) and the general fertility ratio (total births expressed as a proportion of women aged 15-44) have also risen over the period. In other words, proportionately more children are being born to the same number of Kuwaiti women in the child-bearing age-group than in all the earlier years.

Table 6.6 BIRTHS AND BIRTH RATES : KUWAITIS ONLY

Date	Total Population	Total Kuwaiti Births	Crude Birth rate per thousand	General Fertility ratio per thousand
1958	123,900	4,658	37.5	231 ?
1959	135,000	5,675	42.0	
1960	147,000	6,842	46.5	
1961	161,909	6,911	42.7	258
1962	175,200	7,921	45.2	
1963	189,500	9,261	48.9	
1964	204,900	10,014	48.9	
1965	220,100	11,291	51.3	268
1966	240,000	14,057	58.6	

N.B. Statistics presented for Census years (1957, 1961, & 1965) are more reliable than for the intervening years.

Calculated from :
i) Census of Population; 1957, Table 3; 1961, Table 6; 1965, Table 9.
ii) Ministry of Health, Annual Reports, 1958-1962.
iii) Statistical Abstract, 1967, Table 15.

Several factors explain this propensity to have more children among Kuwaitis :

i) Health facilities have improved greatly in recent years (see above). More young babies are kept alive than ever before and mothers run a much reduced risk during childbirth.

ii) Rising affluence has meant that another child brings no financial problems - rather, it brings prestige to the family.

iii) More young women are in the child-bearing age group than before; this will continue because of the "progressive" form of the population pyramid.

iv) Family size is growing steadily and marriage occurs at a young age. 379 marriages of a total of 1,820 in 1966 occurred when the bride was under the age of 19 (Monthly Statistical Bulletin, January 1967, Table 8).

v) Finally, every Kuwaiti knows that his offspring are guaranteed a free and comprehensive education while young, with a well-paid job at the end of his or her education.

Birth control is growing in popularity and devices are both on open sale and available free through the health service in Kuwait. As yet, its effects seem limited.

b) Non-Kuwaitis

As Table 6.7 shows, the crude birth rate for non-Kuwaitis is still substantially below that for Kuwaitis. Nevertheless, non-Kuwaitis are reproducing rapidly as sex ratios gradually even out (there were 274 females per 1,000 males in 1957 amongst the alien population; by 1965 the figure had risen to 423), and especially as the number of women in the child-bearing age-group grows rapidly (Table 6.3). Between 1957 and 1965 the proportion of married non-Kuwaitis in the alien population over the age of 15 rose from 39.7 percent to 43.5 percent.

Table 6.7 BIRTHS AND BIRTH RATES : NON-KUWAITIS ONLY

Date	Total Population	Total Non-Kuwaiti births	Crude Birth rate per thousand	General Fertility Ratio per thousand
1958	105,479	2,223	21.1	250 ?
1959	119,824	3,348	27.9	
1960	136,120	4,774	35.1	
1961	159,712	6,031	37.8	287
1962	178,558	7,283	40.8	
1963	199,628	8,459	42.4	
1964	223,184	9,414	42.2	
1965	247,280	9,764	39.4	273
1966	285,493	11,271	39.5	

N.B. Statistics presented for Census years (1957, 1961, 1965) are more reliable than for the intervening years.

Calculated from i) Censuses of Population; 1957, Table 3; 1961, Table 6; 1965, Table 9.

ii) Ministry of Health Annual Reports, 1958-1962

iii) Statistical Abstract, 1967, Table 15.

While the crude birth rate amongst non-Kuwaitis is lower than that for Kuwaitis, it is notable that the former's general fertility ratio has been higher since 1957 (cf. Tables 6.6 and 6.7). Non-Kuwaitis have no stability of residence or long-term career prospects in Kuwait since every year both work and

residence permits must be renewed. Despite this, non-Kuwaitis have free access to Kuwait's health, welfare, and educational services. It seems plausible that non-Kuwaitis use these facilities to the full, thus explaining the higher fertility amongst their women of child-bearing age.

Unfortunately births are not recorded by specific nationalities for the non-Kuwaitis in Kuwait. By assuming that all children under one in the 1965 Census have been born in Kuwait, we can obtain some indication of how fertility varies amongst the nationalities by relating these numbers to the total population of a national group. The results of this calculation appear as Table 6.8 and confirm broadly what was noted in Section IVb above. Calculated "crude birth rates" are highest for those populations with the most balanced age-sex pyramids (see Figs. 5.1-4); that is, Lebanese, Jordanians, Pakistanis, Indians, and Syrians. By comparison the Irani and Omani groups display the lowest "crude birth rates".

Errors are inevitable by this method : overall, 9,764 non-Kuwaitis were born in 1965 and 9,414 the year before, compared with only 8,417 enumerated in the 1965 Census as under age one. But the calculations produce a crude birth rate of 34 per thousand for all non-Kuwaitis compared with an observed figure of 39 per thousand (Table 6.7). Hence, the relative positions of nationalities in Table 6.8 are probably correct, even though absolute rates are probably low.

Table 6.8 CALCULATED "CRUDE BIRTH RATES" FOR VARIOUS NATIONALITY GROUPS IN 1965

Nationality	Children under 1 year	Total Population	"Crude Birth Rate per thousand
Lebanese	1,136	20,877	54.4
Jordanian	3,808	77,712	49.0
Pakistani	484	11,735	41.2
Indian	411	11,679	35.1
Syrian	570	16,849	33.8
Sa'udi	153	4,632	33.0
Egyptian	352	11,021	31.9
British	82	2,837	28.9
Iraqi	694	25,897	26.8
Omani	381	19,520	19.5
Irani	202	30,790	6.6

Calculated from : Census of Population, 1965, Table 23.

VI. MORTALITY

Deaths in Kuwait are less comprehensively registered than births; of 3,603 people buried by the Municipality in the year April 1966 - April 1967, only 78 had the necessary certificates (Municipal Report, 1966-7, p.162). To correct this under-estimation in the official statistics, recourse was made to the Municipal Burial Books and graveyard records to provide a more realistic mortality rate for both Kuwaitis and non-Kuwaitis. Graves were counted in

in Kuwait's main graveyards in order to check the Municipality's statistics.

With such fundamentally different age-sex structures (Figs. 5.1-4) the mortality experience of Kuwaitis and non-Kuwaitis also differs greatly. The very low crude death rates shown for the whole population 1958-1966 are a reflection of two factors - the under-recording of deaths and the extremely low general mortality rates of the non-Kuwaitis (Table 6.9).

Table 6.9 MORTALITY STATISTICS FOR KUWAIT

Year	Total deaths recorded by Ministry of Health	Crude death rate per thousand	Deaths recorded in municipal records	Corrected crude death rate	Crude death rate for Kuwaitis
1958	769	3.3			
1959	892	3.5			
1960	1,235	4.4			
1961	2,504	7.8			
1962	2,180	6.2			
1963	2,139	5.5			
1964	2,618	6.1			
1965	2,468	5.3	3,409	7.3	9.8
1966	2,813	5.5	3,510	6.8	9.5

Calculated from :

i) Total deaths from Ministry of Health, Annual Reports, 1958-1964; and Statistical Abstract 1967, Table 16.

ii) Other deaths recorded in Municipality of Kuwait, 1965-67, Annual Reports, Section 8.

iii) Base population as for Tables 6.6 and 6.7.

a) Kuwaitis

With such a young population very few Kuwaitis die of old age; in 1965 and 1966 almost one-third of the total deaths occurred amongst infants under one year old (Statistical Abstract 1967, Table 16). Figure 6.2 shows how the risk of dying is very high at birth, falling to low levels during the teens - a well-established world-wide pattern (Coale & Demeny, 1966; U.N., 1955, Age and Sex Patterns of Mortality).

That more Kuwaitis than ever before are surviving childhood is clear from the falling infant mortality rates. In 1965 the death rate of infants under one was 49.6 per thousand live births; by 1966 this had dropped to 39.5 per thousand. Infant mortality rates of under 25 per thousand are common in the developed world today. With continued heavy investment in health and education Kuwait can be expected to reach these lower mortality levels very soon.

b) Non-Kuwaitis

The pattern of death varies amongst the non-Kuwaiti population from that described above (Fig.6.2). Broadly, early childhood and old age are still the most likely periods when death will occur, but age-specific death rates as a whole are much lower than for Kuwaitis.

As the summary table shows (Table 6.10), general mortality is low since there are proportionately fewer older non-Kuwaitis than older Kuwaitis living in Kuwait (Table 6.3).

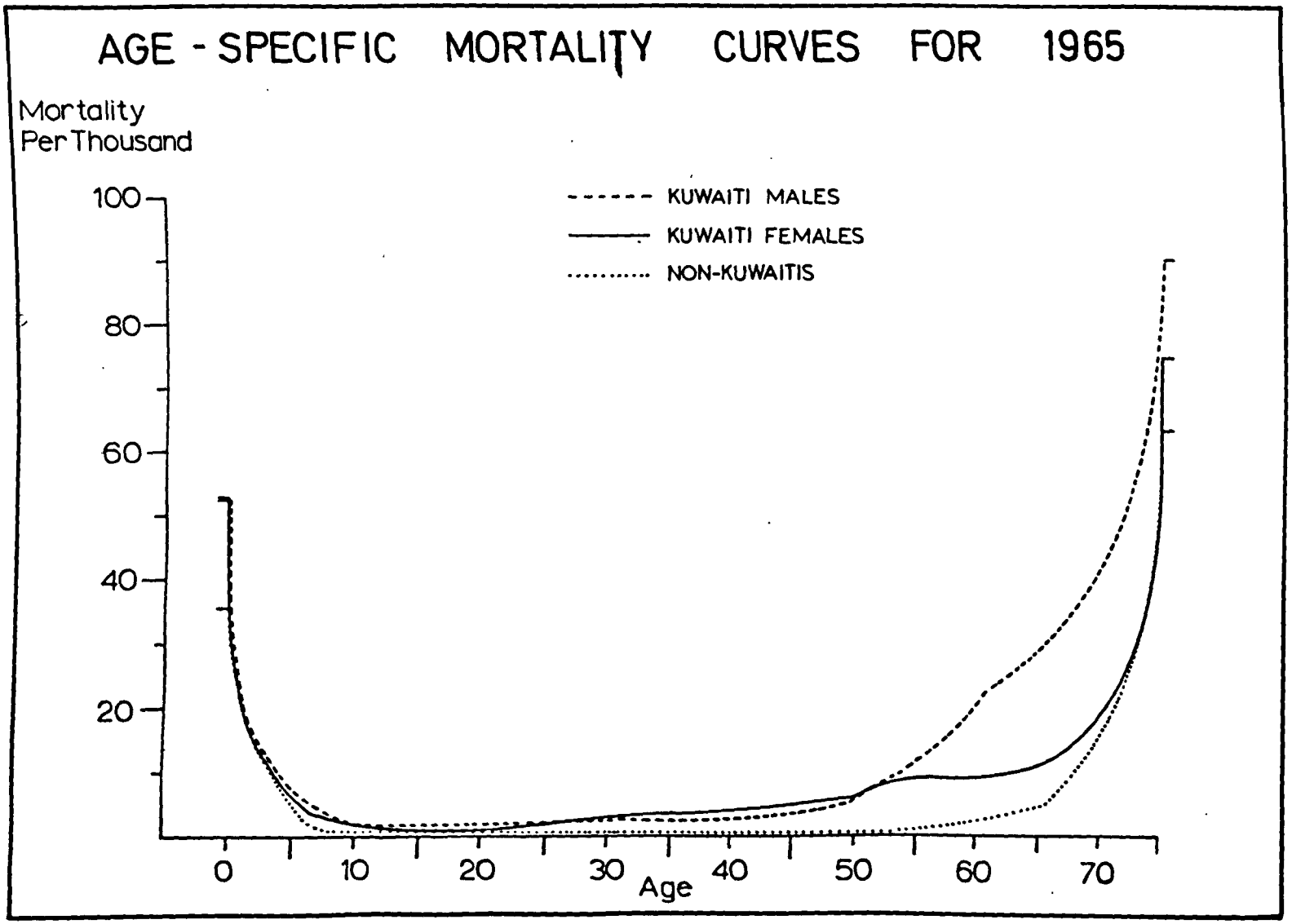

AGE - SPECIFIC MORTALITY CURVES FOR 1965
Mortality
Per Thousand
KUWAITI MALES
KUWAITI FEMALES
NON-KUWAITIS
100
80
60
40
20
0
10
20
30
40
50
60
70
Age

Figure 6.2

Deaths in these older age-groups occur in the migrants' countries of origin and are not recorded in Kuwait. However, infant mortality rates are also lower for non-Kuwaitis (Table 6.10) perhaps because of the higher educational standard and better health of the immigrants. This is difficult to substantiate statistically but in 1964 one-fifth of all infant deaths resulted from gastritis, enteritis, and colitis. Such maladies are often related to wrong feeding habits, themselves associated with illiteracy and lack of medical education (Ffrench, 1966, p.16; Ffrench & Shaker, 1963; and see Kanter, 1967, for comparative work on Libya).

VII. NATURAL INCREASE - CONCLUSIONS

At this point, having reviewed the quality and the trends of the vital rates, we are in a position to reach several conclusions on the rate of natural increase in Kuwait. Table 6.9 summarizes the data presented so far.

a) Kuwaitis

Superficially, Table 6.10 suggests that the Kuwaiti population is increasing as rapidly as any population in the world. Section VI has indicated several deficiencies in the mortality statistics, although the infant mortality figures (VIa above and Table 6.10) are probably correct. If this is so, there seems no reason why the Kuwaiti population should not continue to increase at a high rate as infant mortality is further reduced to European levels (about 20 per thousand). The present rate of

natural increase of 4.15 percent per annum is probably a maximum figure because of under-registered mortality, but even assuming this high rate of growth, by 1970 Kuwaitis will number 269,700 and by 1975, 330,500.

What are the probabilities of Kuwaitis reaching these numbers? Several factors are involved, the most important being future government policy regarding the naturalization of non-Kuwaitis. If wholesale naturalization is accepted instead of the strict segregationist policy in operation at present (see Chapter 5), obviously these numbers will be greatly exceeded.

Other factors include :

i) Fertility ratios have risen steeply recently (Table 6.6); these ratios may level off in future as female emancipation proceeds, or they may increase further as the per capita wealth also rises. Experience from elsewhere suggests the former outcome as more likely.

ii) The 1965 Census population figures may be under-estimates.

iii) Contraception may become more widespread.

iv) The Kuwaiti population will "age" as younger cohorts move into the upper age groups. Some reduction in the crude birth-rate can be expected as the proportion of women in the child-bearing age-groups declines for this reason (cf. experience in Hong Kong, Freeman & Adlakha, 1968).

Table 6.10 A SUMMARY OF VITAL RATES FOR KUWAITIS AND NON-KUWAITIS IN 1965

	MARRIAGES		BIRTHS		DEATHS		INCREASE	
	Crude marriage rate per thousand	Crude divorce rate per thousand	Crude birth rate per thousand	General fertility ratio per thousand	Crude death rate per thousand	Infant mortality rate per thousand	Percent rate of natural increase	Females per thousand males
Kuwaitis	-	-	51.3	268	9.8	49.5	41.5	955
Non-Kuwaitis	-	-	39.5	273	4.0	30.4	35.5	423
Total	4.3	1.6	45.0	270	7.3	40.2	37.7	632

Calculated from : i) For natality statistics, see Tables 6.6 and 6.7.

ii) For mortality statistics, see Table 6.9

iii) Marriage rates from Statistical Abstrac 1967, Tables 17 and 18.

b) Non-Kuwaitis

Despite the high natural rate of increase for non-Kuwaitis (Table 6.10), the most important factor in their overall increase is the volume of immigration (Chapter 5). The volume of immigration varies greatly from year to year - a net emigration of 17,800 in 1964 was followed by net increases of 12,800, 29,800, and 156,500 in 1965, 1966, and 1967, respectively (Statistical Abstract, 1967, Table 12; and Table 5.8 above). Assuming a net

in-migration of 20,000 per annum in future, almost an extra quarter of a million non-Kuwaitis could be in Kuwait in 1975.

By comparison, even with a natural increase rate of 3.97 percent per annum, only an extra 103,222 will be added to the 1965 numbers of non-Kuwaitis by 1975. Recent trends observed above suggest that the crude birth rate of non-Kuwaitis may well surpass that of the Kuwaitis themselves. Numerically immigration will most likely remain of greatest significance in the increase of the alien population, but politically and economically the use of Kuwait's health and educational facilities by growing numbers of immigrant children may have a more profound significance.

CHAPTER SEVEN

POST-WAR EXPANSION OF THE BUILT-UP AREA

Following the rapid rise in oil revenue in the post-War period (Chapter 4) and the sizeable influx of foreign-born immigrants into Kuwait (Chapter 5), increasing demands were placed on the Old City which it was ill-equipped to withstand. To relieve both traffic congestion and residential squalor (see below) the Government embarked on a rapid programme of urban development in the 1950s which largely shaped the form of the present-day city. This Chapter describes the course of this urban expansion leaving the social and demographic differentiation of these new urban areas until subsequent Chapters.

I. KUWAIT CITY BEFORE OIL DISCOVERIES

a) Extent

Early accounts of the form and extent of Kuwait City are sparse; one of the very few 19th century travellers to visit Kuwait was J.H. Stocqueler in 1831. He writes of the city :

> "Koete, or Grane as it is called in the maps, is in extent about a mile long, and a quarter of a mile broad. It consists of houses built of mud and stone, occasionally faced with coarse chunam, and may contain about 4,000 inhabitants. The houses, being for the most part square in form, with a courtyard in the centre

> (Having the windows looking into the yard), present but a very bare and uniform exterior, like, indeed, all the houses in the Persian Gulph. They have flat roofs, composed of the trunk of the date tree. The streets of Koete are wider than those of Muscat or Bushire, with a gutter running down the centre. A wall surrounds the town on the desert face, but it is more for show than protection, as it is not a foot thick". (Stocqueler, 1832, Vol.I, p.18).

Lorimer's "Gazateer" of 1908 provides more substantial information on the form and extent of Kuwait City - at that time the only centre of significance in Kuwait. The city in the opening years of this century extended 2 miles along the shore and a quarter to three-quarters of a mile inland in a rough semi-circle. Between 1870 and 1900 the population of the city and the built-up area had doubled, probably by immigration (see Chapters 3 and 5). Sites granted by the Shaikh were rapidly being built upon, particularly in a long suburb on the south-western edge of the city called "Mirqab" (Fig. 7.1). City development was contiguous and close-packed :

> "The streets are irregular and winding, and many of them blind alleys and the town is not laid out in any general plan; the only street of apparent importance, besides the main bazaar which runs at

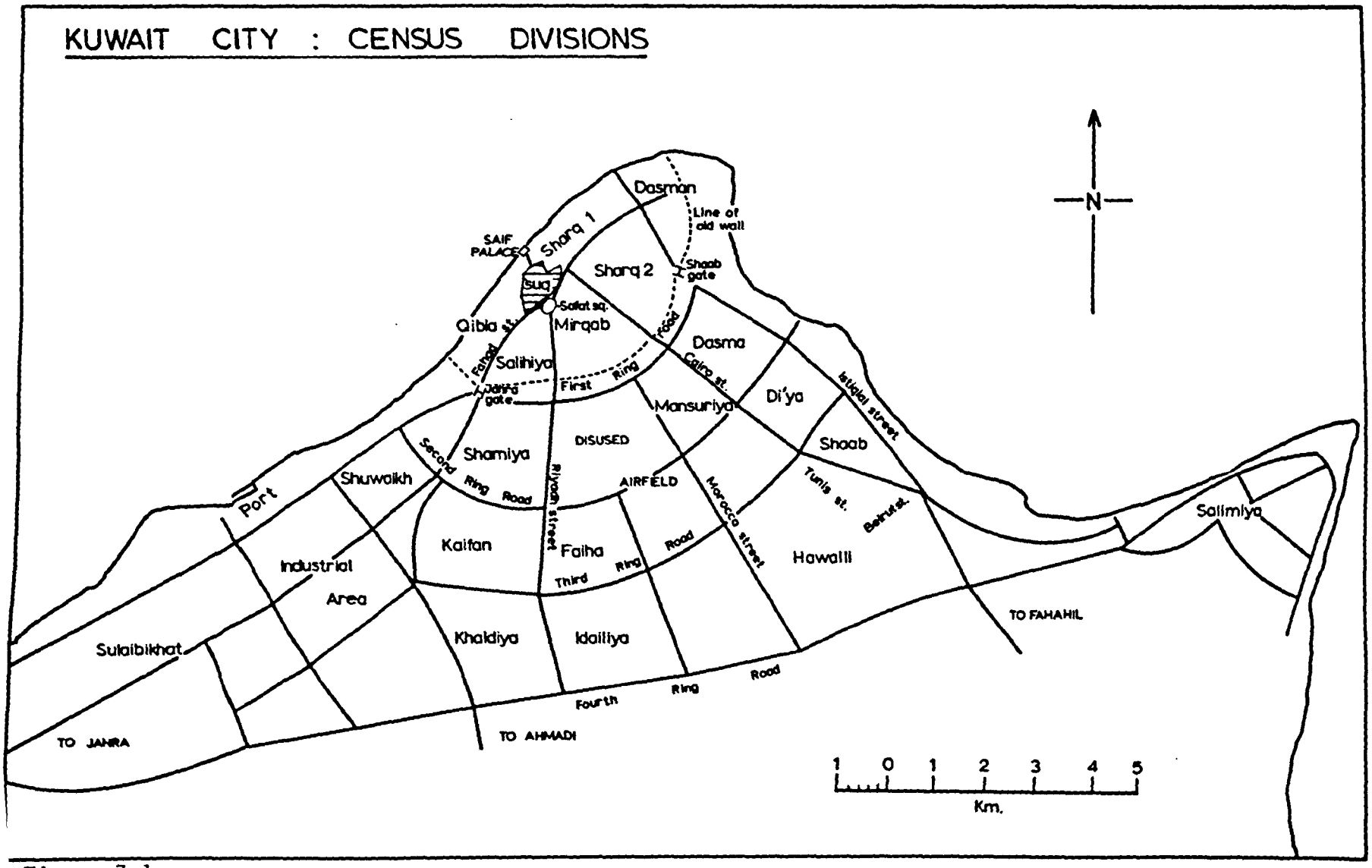

KUWAIT CITY : CENSUS DIVISIONS
N
Dasman
Line of old wall
SAIF PALACE
Sharq 1
Sharq 2
Shaab gate
Suq
Sallat sq.
Mirqab
Qibla st.
Fahad al-Salem road
Salihiya
Jahra gate
First Ring road
Dasma
Cairo st.
Di'ya
Istiqlal street
Mansuriya
Shamiya
DISUSED
Second Ring Road
Riyadh street
AIRFIELD
Shaab
Tunis st.
Beirut st.
Morocco street
Port
Shuwaikh
Salimiya
Kaifan
Faiha
Third Ring Road
Hawalli
Industrial Area
TO FAHAHIL
Sulaibikhat
Khaldiya
Idailiya
Fourth Ring Road
TO JAHRA
TO AHMADI
1 0 1 2 3 4 5
Km.

Figure 7.1

> right angles to the sea about the middle of the town, is one which leads from the suq or market square situated at the back of the town near the Mirqab quarter, to the north-east of the town but it has no general name. Most of the houses have only a ground floor but appear higher owing to the parapet wall enclosing the roof; they are generally built surrounding a courtyard". (Lorimer, 1908, p.1050).

Subsequent descriptions are rare up to the modern period but photographs become more common, especially when oil exploration began in earnest in 1935. Vertical air photographs are not available before 1951, but both K.O.C. and the Government have a selection of horizontal and oblique photographs dating from the 1930s which the researcher was kindly allowed to use. Plates 7.1 and 7.2 illustrate the high density single-storey housing pattern which persisted until the 1950s in most of the town and which remains today in some older parts of the city (e.g. Sharq on the sea front). Plate 7.1 shows the broadly semi-circular outline of the city, particularly the space which separated the continuously built-up area from the outer wall constructed in 1920. This space was gradually in-filled by later settlement, particularly by the southern extension of Mirqab quarter (Fig. 7.1).

Plate 7.1 Mirqab in the 1930s. Note the space between the edg
of the town and the wall.

Plate 7.2 Safat Square and the Suq looking northwards
about 1940.

b) Internal Characteristics and Differentiation

Arab cities are noted for their familial affinity in structure and architectural form. Kuwait, before reconstruction began in recent years, had several attributes shared by Middle Eastern cities elsewhere. Lorimer mentions names of quarters in Kuwait and refers to the differentiation between the residential areas for the 4,000 Negroes (two-thirds of whom were still enslaved or Mamluk in 1907) and those for the other Arabs. Without knowing more about traditional society at that time, it is difficult to enlarge further on functional areas within the city, but several distinct structural areas are discernable on the early air photographs.

i) As Shiber (1964) points out, the central square (Maidan or Saha) is the focus of most Arab cities. Plate 7.2 shows the central square of Kuwait called Safat Square in the mid-1930s which has always been a notable feature of Kuwait City. The square was the departure and arrival point for caravans crossing the desert since the Custom House was located near the square, together with the cafes consisting of tin and rush huts and shown in the foreground of Plate 7.2. These cafes, according to older Kuwaitis who remember this period, were the meeting places of Badu and merchants who gathered in Safat Square to conduct business and renew acquaintances.

ii) The commercial core of most Arab cities was the suq or bazaar, preserved in many cities such as Kuwait where it still

concentrates a sizeable proportion of the retail and wholesale trade (see Chapters 10 and 11). Plates 7.2 and 7.3 show the original bazaar stretching from Safat Square towards the dhow harbour and the Ruler's Palace on the waterfront. This block between Safat and the sea was a maze of narrow twisting lanes, some of them roofed with rush matting or corrugated iron, each lane containing a row of small stalls, mostly selling closely allied goods. In Plate 7.2 the corrugated iron roofing, erected during World War II, indicates the layout of the main shopping lanes. Near Safat, the small shops still specialize in Badu requisites - weapons, leather goods, tent material, cloaks, and rope. Further towards the coast was the next market; the long twisting lane in the centre of Plate 7.3 was an avenue where most of the major merchants maintained their offices and some of their stores. Much of the suq as a whole remains today; districts within the suq are still known by the name of the principal products sold, e.g. Suq az-Zil - the carpet suq; Suq as-Silah - the weapon suq; and Suq al-Laham - the meat suq (see Chapters 10 and 11 for more details).

iii) Mosques are prominent features of settlements throughout the Islamic world. Early this century Kuwait had between twenty and thirty, four of which were Friday jami mosques. Plates 7.3 and 7.4 show the squat minarets scattered throughout the city, each mosque serving the needs of its nearby residents. Many of the mosques were family mosques constructed by a group

Plate 7.3 View north-westwards over Safat Square in the late 1950's.

Plate 7.4 View eastwards over the main bazaar: Mubarakia in centre.

of relatives in a particular quarter. The largest mosque, attended by the Ruler on public feasts and festivals, is Masjid as-Suq located in the centre of the bazaar (Plate 7.3, centre).

iv) Several of the Ruling family and the richer merchants constructed "palaces" - in fact, large houses - in the years before oil exploration began. The Ruler himself maintained a walled residential enclosure at Dasman (Fig. 7.1) and a Council Chamber in the town centre on the waterfront - now the Saif Palace. Along the shore between Dasman and the Saif Palace richer members of Kuwait's society built substantial two-storey houses which today are still prominent features of the Kuwait waterfront.

v) Finally, as is common with most Arab countries, graveyards in Kuwait are regarded as inalienable plots of land. In Plates 7.3 and 7.4 and on the 1951 air photographs (Plate 7.5), the large open spaces within the built-up area are graveyards - several of them disused - on which residential and other development is forbidden. In only one instance - the graveyard north-west of Safat Square and shown on Plate 7.4 - has development been permitted, in this case the construction of a public park. Recent legislation will allow the development of these older cemeteries in future, thus erasing a prominent feature from Kuwait's townscape.

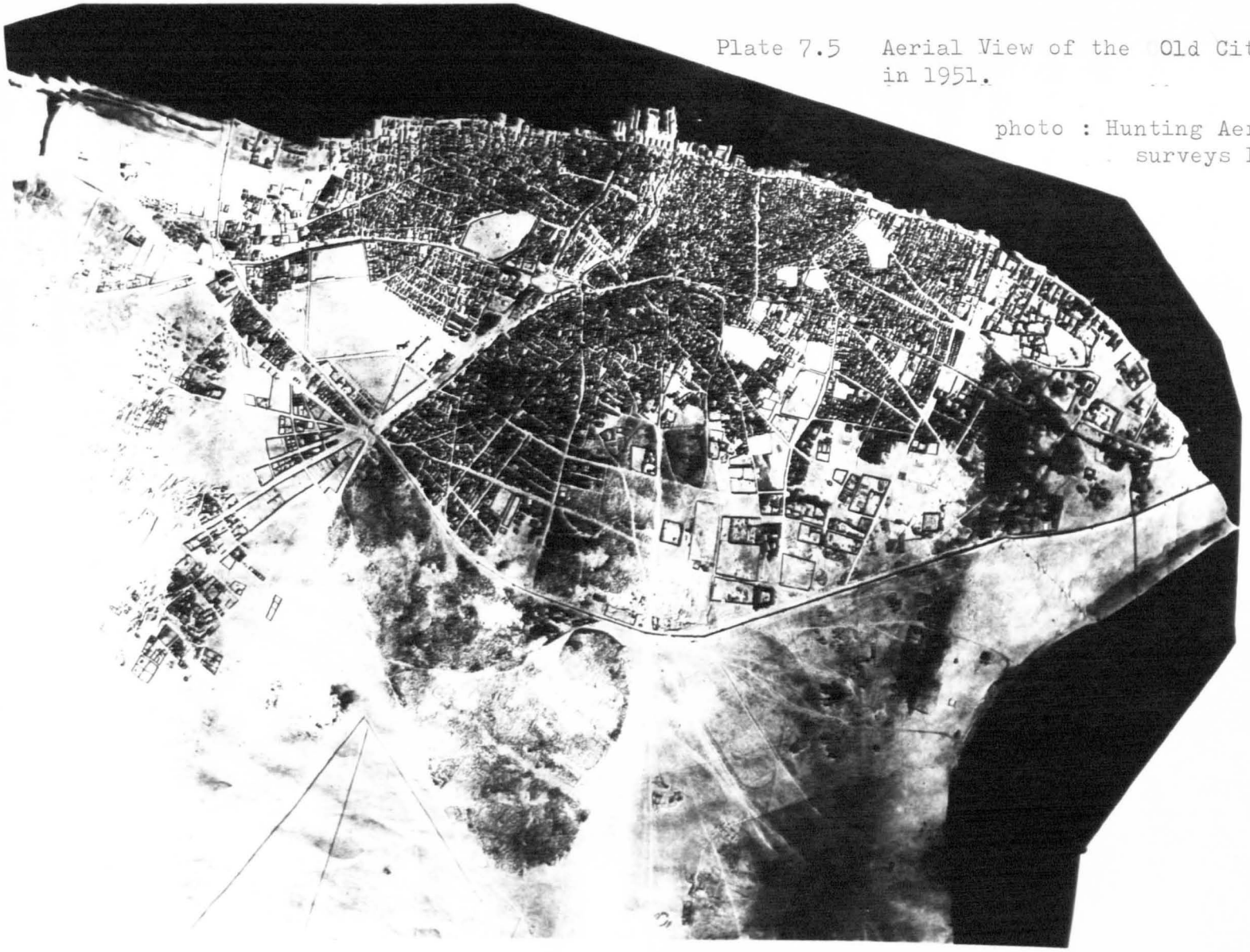


Plate 7.5 Aerial View of the Old City in 1951.

photo : Hunting Aero-surveys Ltd.

II. KUWAIT CITY AFTER THE DISCOVERY OF OIL

With spiralling oil revenues and a rising immigrant population (Chapters 4 and 5) Kuwait City expanded rapidly both vertically and horizontally. Expansion was not haphazard, as the degree of financial and legislative power which the Government was able to exercise was impressive by any standards (see Shiber, 1964, for details). These powers were freely used to transform the city physically, incidentally beginning a process of population re-adjustment in which people were moved from within the Old City to the newer suburbs beyond. Air photographs taken in 1951, 1960, 1964, and 1967 are invaluable evidence in tracing the course of this post-War phase of planned urban expansion.

a) The City in 1951

Plate 7.5 shows the entire built-up area of Kuwait City in 1951 forming a rough oval centred around the Ruler's Palace and the docks on the waterfront. Clearly visible are the features mentioned in 7.I.b above - the central square called Safat, the covered suq running between the sea and Safat, the tiny scattered mosques and minarets, the larger houses on the waterfront, and the open spaces of the graveyards - all enclosed by the semi-circular wall built in 1920. Some of these elements are illustrated in Fig. 7.2.

By 1951, despite five years of oil exporting and revenue payments, little physical change had overtaken Kuwait. Immigration was beginning on a large scale (Chapter 5) but

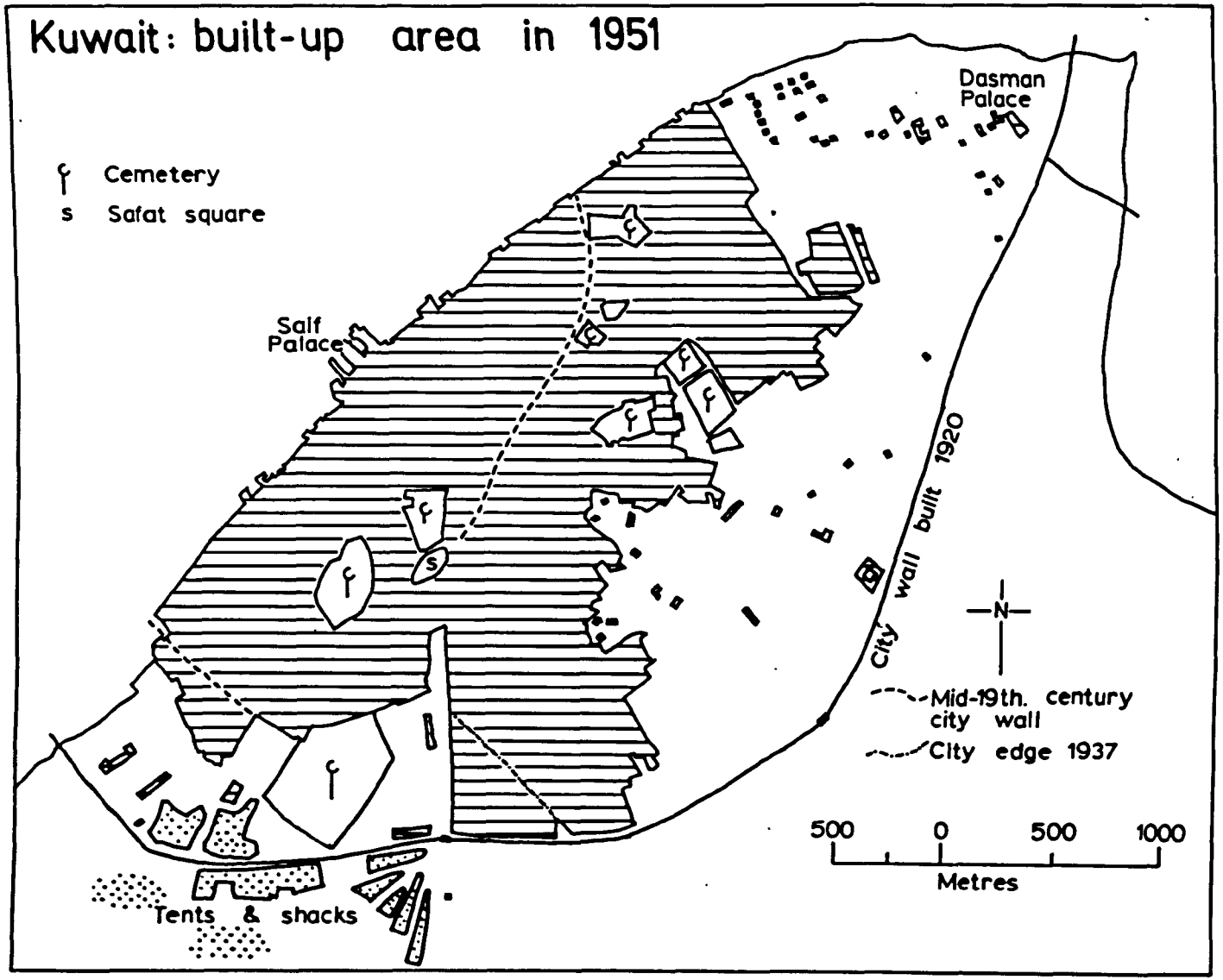

Kuwait: built-up area in 1951
Dasman Palace
Cemetery
s Safat square
Salf Palace
City wall built 1920
N
Mid-19th. century city wall
City edge 1937
500 0 500 1000
Metres
Tents & shacks

Figure 7.2

accommodation was provided by K.O.C. for Company employees at Maqwa or Ahmadi, while other arrivals lived in shacks and tents on the periphery of the city (Plate 7.5) or west of the city in a labourers' camp (Madina al-Amal). However, both the growing number of motor vehicles (over 1,000 in 1951) and the number of new arrivals were good reasons for embarking on a programme of wholesale city development. There was another reason - dealt with in detail below - which was to distribute the oil wealth throughout the private and the public sectors of the economy. Large-scale purchase of land in the Old City by the Government, together with the benefits brought to the merchant community through contracts for Government constructions projects, were important facets of the fiscal policy of spreading the oil wealth amongst Kuwaiti citizens. This land and property acquisition scheme warrants close attention not only because of its effects on the economy as a whole, but also because of the changes which it wrought in the structure of the city. Land values are fundamental components of the structure of any city, so that a detailed study of the property acquisition scheme was undertaken with the aim of identifying the structure and changes in Kuwait's property values from the inception of the scheme to the present day.

III. THE GOVERNMENT LAND PURCHASE SCHEME

a) Aims

The property acquisition scheme began in 1951 with the

twin aims of infusing sums of money into the private sector of the economy whilst at the same time facilitating the wholesale reconstruction of the Old City. Table 7.1 indicates the amounts of money involved; almost K.D. 600 million was disbursed in less than 15 years.

Table 7.1 ANNUAL EXPENDITURE ON THE GOVERNMENT PROPERTY ACQUISITION SCHEME IN KUWAITI DINARS BETWEEN 1952 AND 1967

Year	K.D.	Year	K.D.
1952	2,142,088	1960-61	42,964,939
1953	3,431,052	1961-62	58,858,678
1954	6,836,709	1962-63	46,472,873
1955	12,684,179	1963-64	31,537,487
1956	12,139,907	1964-65	44,997,006
1957	21,638,181	1965-66	77,801,679
1958	40,147,909	1966-67	95,000,000 *
1959-60	85,335,176 +	TOTAL	581,977,563

\+ Financial year of 15 months

* Estimate for the calendar year of 1967 : up to March 13th 1967, K.D. 72,650,174 had been spent.

Source : Ministry of Finance, March 18th 1968 (Gazette).

The Mission of the International Bank for Reconstruction & Development expressed some criticism of the scheme. In the six years before 1964 50percent more had been spent on property

acquisition than on public capital projects (I.B.R.D., 1965, pp.88-89). Much of the money disbursed on the scheme is apparently remitted abroad in private investment portfolios and is thus of relatively little utility in the economy of the State as a whole.

Nevertheless, the overall success of the scheme is inescapable, both in hastening Kuwait's economic development (Chapter 4) and in permitting the very rapid re-development of the Old City. One of the most important effects of the scheme was the way it brought about the amalgamation of tiny plots of land in private ownership into larger State-owned blocks suitable for re-development.

b) The Process of Property Acquisition

Details of the scheme were not easily available in Kuwait. After a lengthy period of preparation and enquiry in the Municipality the Government Property Acquisition Office ('Amlak al-Hukuma) agreed to co-operate and to release details of the purchase of specific blocks of land from individuals. Clearly this study of land values relies heavily on the patience and trust of this Office and its staff, particularly Mr. Ahmad al-Haj.

The price paid for any property was broadly determined by a Government Valuation Committee which recognized three categories of property, all of which came within the scope of the scheme :

1. 'Ardh - an undeveloped plot of land.
2. Hawta - a walled but undeveloped plot.
3. Bait - a house or other building standing in its own ground.

Valuations were based broadly on a property's location but no standardized measure was used for this purpose. Where the property was of sufficient size the front, central, and rear portions were attributed different values, e.g., the front 10m facing onto a street or alley was valued at roughly double the rate for the back. This figure is only an estimate, since if the back of the property faced onto a street it was valued as highly as the front. Rates for 'Ardh and Hawta properties are almost identical; together the prices paid for such plots of land average out at 46.4 percent of the prices paid for houses or built-up property (Table 7.2).

Land purchase by the Government began on a large scale in 1952. Owners were approached and offered a price for their property based on an estimate by the Valuation Committee which annually fixed standard prices per unit area. Exceptional properties (e.g., centrally located plots) were valued at prices above this standard. If the owner disagreed with the offered price he could lodge an appeal for a higher price. In several cases prices were revised upwards.

While the scheme was straightforward in principle, it was operationally complex. Kinship ties and personal loyalties were apparently of some importance in the determination of final prices. The documentation of the scheme is equally involved. Plots purchased by the State were outlined on large-scale maps in the Municipality and each plot was attributed a code number. This number has to be used to check other details of the sale - including the type of property involved and its sale price - which are stored in undated files elsewhere in the Municipality. An additional complication was that up to April 1961 payment was made in Rupees; Kuwaiti Dinars (K.D.) were used after that date. Square metres replaced square feet in April 1964 so that in both cases conversion was required to ensure compatability of records.

The price of almost 100 plots of land located in various parts of the city were extracted from the Municipal records despite the many difficulties involved. Details of these sample plots appear as Appendix 2 and provide the statistical base for the study of land values and the construction of maps showing relative land values at various dates. As Fig. 7.3 shows, most of the Old City comes within the scope of the scheme.

c) Property Values

As Table 7.2 shows, prices have risen steeply since 1952.

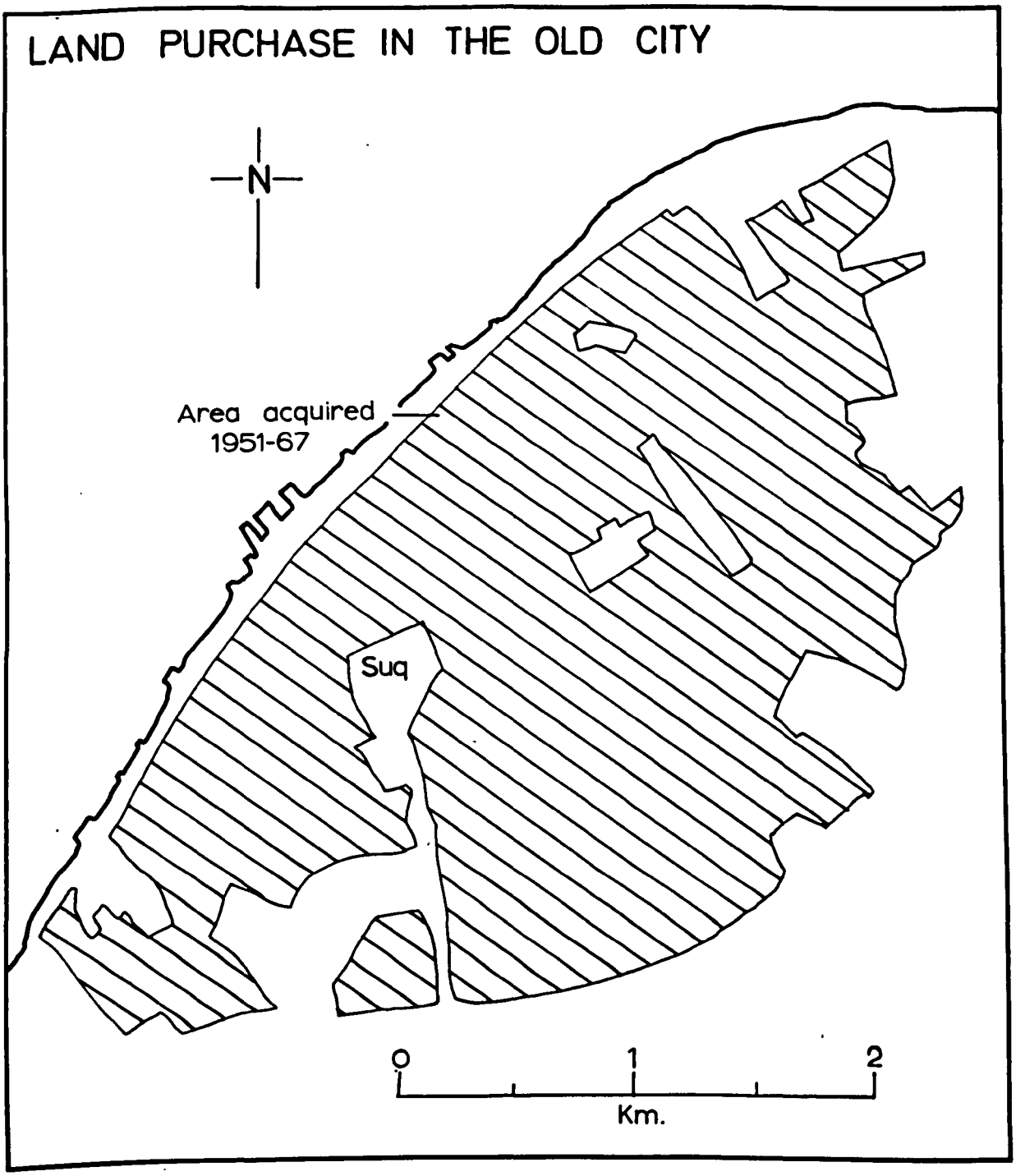

LAND PURCHASE IN THE OLD CITY
N
Area acquired
1951-67
Suq
0
1
2
Km.

Figure 7.3

Table 7.2 AVERAGE ANNUAL PRICES IN KUWAITI DINARS PER SQUARE METRE FOR PROPERTY IN THE OLD CITY

Year	Land with house	Land only	Year	Land with house	Land only
1952	-	4.033	1960	162.370	129.203
1953	12.917	7.937	1961	159.254	-
1954	28.062	14.133	1962	145.099	-
1955	48.581	10,899	1963	207.228	-
1956	48.121	23.309	1964	175.070	-
1957	77.696	19.375	1965	187.360	-
1958	71.256	37.944	1966	199.359	-
1959	221.370	68.622			

Calculated from : Municipal Property Records

Prices for land rose 32 times over between 1952 and 1960, while those for houses increased 15.4 times over between 1953 and 1966. Neither showed a steady increase because of the "skewing" effect produced by the purchase of large blocks of either very dear or very cheap property in any one year. In addition, the Valuation Committee considered that the rise in prices in 1960 was too steep (between 1958 and 1959 prices tripled) so that prices for houses and land were lowered by 25 percent and prices for open ground by 15 percent. By 1963, however, prices had surpassed their 1960 level.

d) The Distribution of Property Values

As a result of this process of land and property acquisition by the Government several notable changes took place in the value of the districts within the Old City. Appendix 2 gives the detailed statistics by the areas as shown on Fig. 7.4.

Initially, as Fig. 7.5 shows, areas 3, 4, 8, and 9 surrounding the Suq in the City Centre had the highest values within the Old City. Figs. 7.5-7 involve a degree of generalization which is necessary to reveal the overall pattern. The details (as Appendix 2 shows) indicate that property fronting onto the main thoroughfare was valued at rates well above the figures shown on Fig. 7.5. In this first period between 1952 and 1956, for example, plot 969 (number 27 in Appendix 2) which fronted onto Safat Square was sold for K.D. 161.5 per square metre in 1955 compared with the average of K.D. 50-100 for district 3 as a whole. Similarly, houses on the sea-front were sold at above average prices. Plot 40 in Appendix 2 was sold for an average of K.D. 218 per square metre compared with the district average of K.D. 170-189 in 1962-66.

As the scheme progressed, areas to the north-east of the City Centre experienced a relative decline in land values although, of course, in absolute terms their values increased several times over. While areas 3 and 8 (Fig. 7.4), which contain parts of the Suq retained their uppermost position between 1957 and 1961 (Fig. 7.6), areas 2 and 7 increased

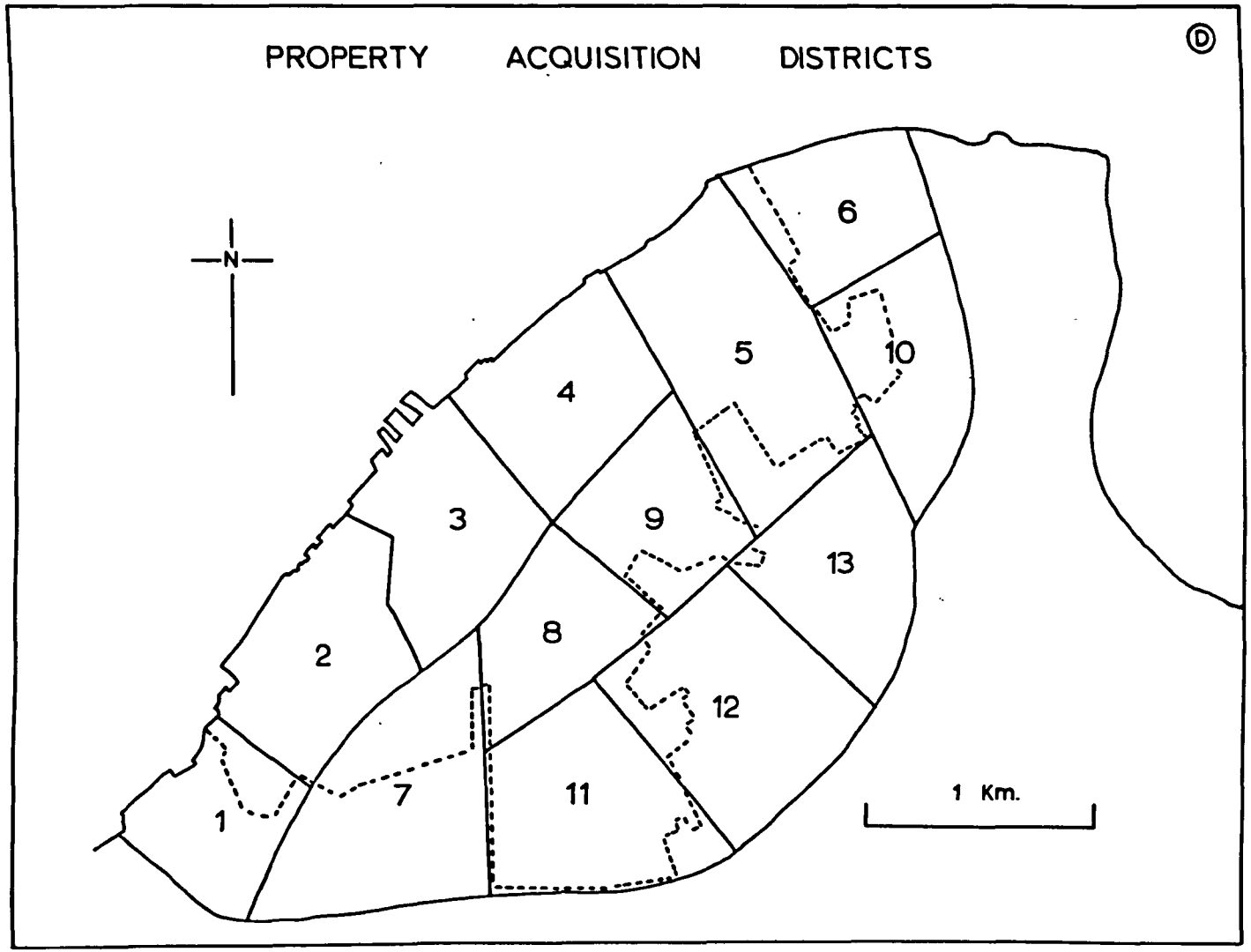


Figure 7.4

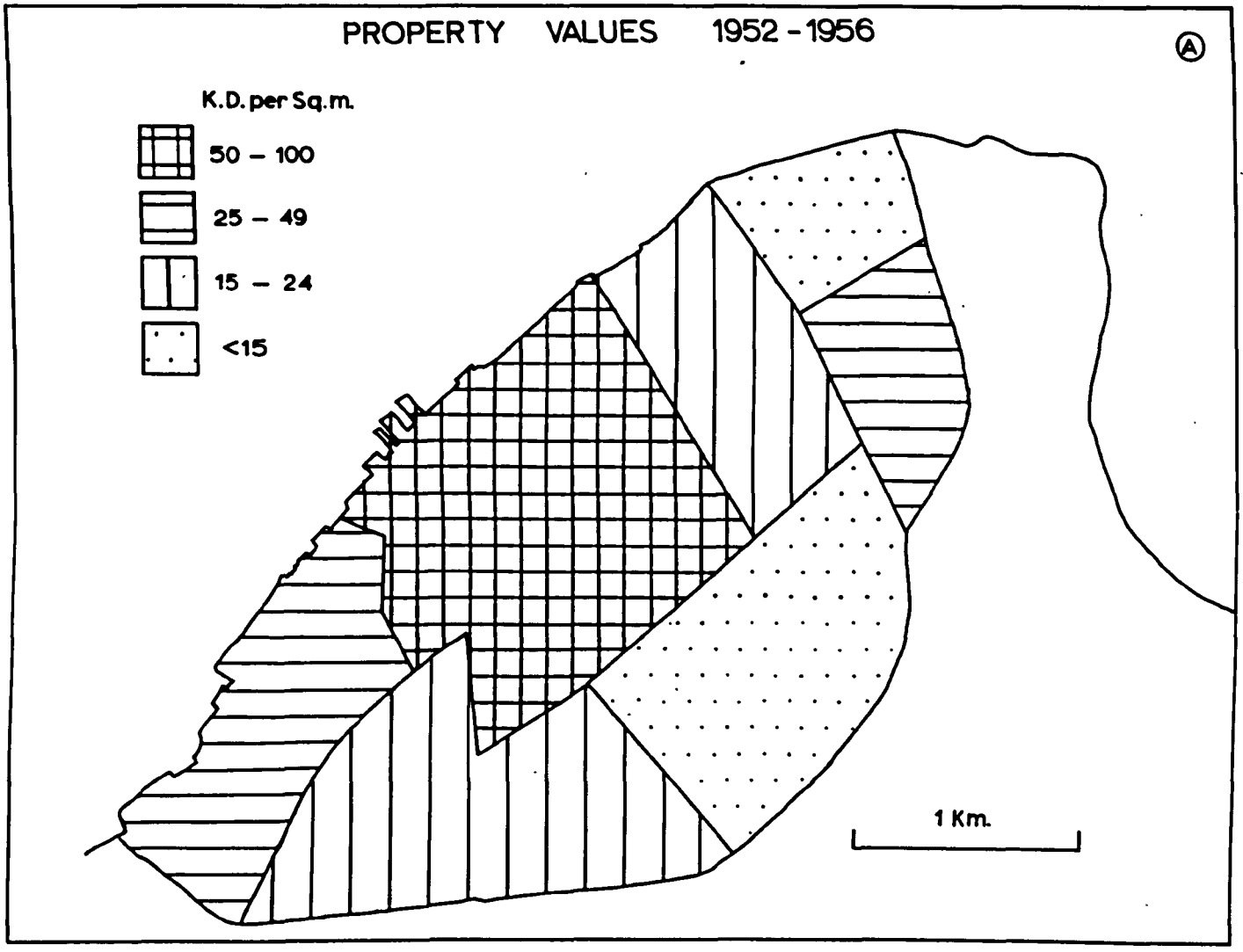


Figure 7.5

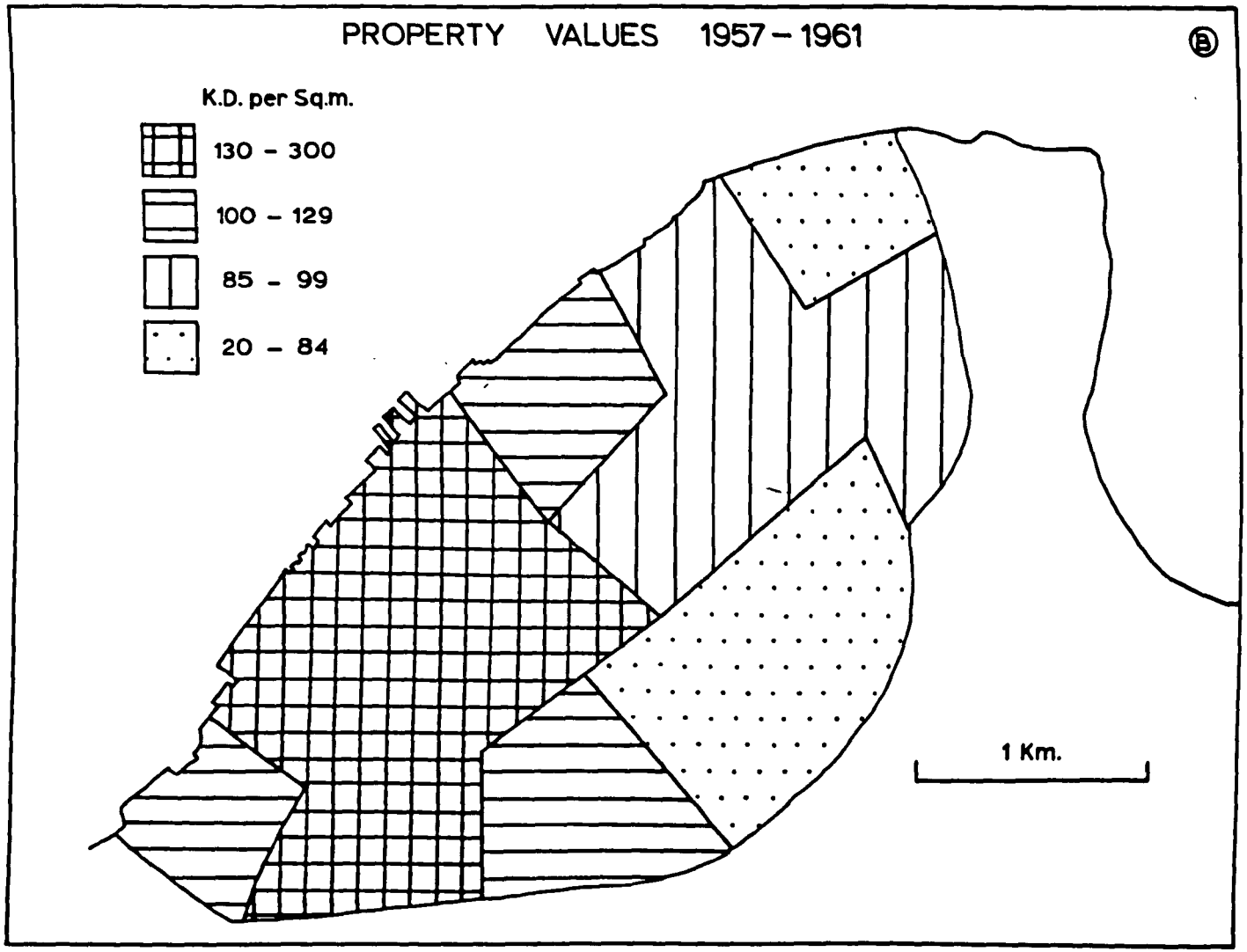

PROPERTY VALUES 1957 – 1961
K.D. per Sq.m.
130 - 300
100 - 129
85 - 99
20 - 84
1 Km.

Figure 7.6

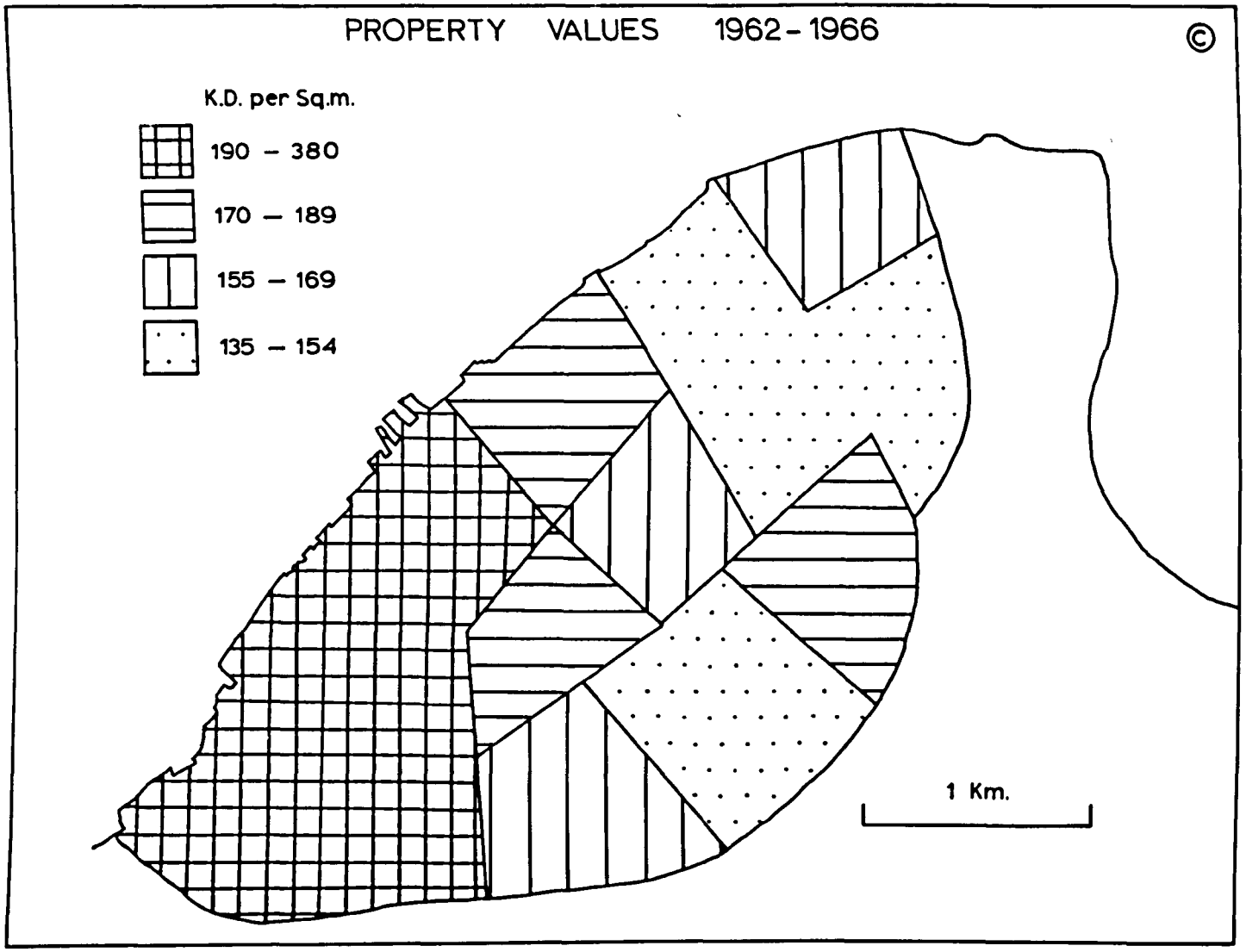

PROPERTY VALUES 1962-1966
©
K.D. per Sq.m.
190 – 380
170 – 189
155 – 169
135 – 154
1 Km.

Figure 7.7

sharply in value. This increase, continued between 1962 and 1966, was associated with the growing commercial significance of Fahad as-Salim Street which was instigated to give a "modern" facade to the Old City by providing it with new arcades of shops and offices laid out in the Western manner. As Chapters 10 and 11 will show, this area has grown to rival the Suq in commercial importance, and indeed to surpass the Suq in certain branches of retailing. It is of great significance that despite deliberate inflation of their overall values land values, as illustrated by Figs. 7.5 - 7.7, have kept pace with the changing functional differentiation within the Old City.

As a corollary of this evolution it is notable how older areas in the north-eastern quarters of the town - initially high status areas and relatively highly priced (Fig.7.5) - have fallen behind in the spiral of rising property values in recent years. Dasman (districts 6 & 10 approximately on Fig. 7.4) was originally the palace quarter for the Ruling Family and it still contains some notable public buildings and large houses, including the Political Agency, now the British Embassy. However, these attributes are apparently of minor significance today, as commercial firms in the City's west end replace the traditional pattern of land values for a distribution which bears a close likeness to that in cities of the Western world.

e) Land Values beyond the Old City

As land purchase by the Government within the Old City was linked to land sales in the desert beyond the city wall (see below), a comparison of prices between the two areas illustrates the level of inflation reached in the City within the wall.

In 1953, in Dasma, Kaifan, and Shamiya (Fig. 7.1), land was sold at between K.D. 0.30 to K.D. 0.42 per square metre. In 1967 prices ranged between K.D. 17-25 for land in the same suburbs.

Prices per square metre rose from K.D. 2.013 in 1955 to K.D. 35.3 in 1959 and K.D. 55 in 1966 for land and property together. In parts of Hawalli (Tunis Street) prices for open ground rose from K.D. 2.22 per square metre in 1955 to K.D. 43.0 in 1966; while in Beirut Street prices rose from K.D. 8.88 to K.D. 52.0 between 1956 and 1966. Prices in the new suburbs, while increasing rapidly as the city expanded, were far below those inside the Old City (Appendix 2).

IV. PLANNING AND URBAN EXPANSION

a) The 1952 Plan

Clearly Government planning was bound to play an important role in shaping the form of the new city with the Administration assuming such an important economic position through the property acquisition scheme. In 1952 a British Consultant firm, Minoprio, Spencely & Macfarlane, was enlisted

to produce a master plan which was to determine to a large extent the location of subsequent development and the form of the contemporary city (Fig. 7.8). This Plan involved the Government in the construction of 17 major residential blocks (A to Q on Fig. 7.8), arranged concentrically around the Old City and linked by a broadly radial road system. Hawalli was to be expanded to become a town of 15,000 people outside the grid-iron inner neighbourhood blocks. Shuwaikh (areas R and S) was reserved for industry, and areas T, U, V, and W west of Shuwaikh for health and recreational land uses. Despite suggestions for the construction of an entirely new city outside the old town (Ministry of Guidance, 1963, p.148; Shiber, personal communcation), the Plan recommended that the town within the wall should remain the city centre.

Thus the Plan embodied several points of lasting significance to the final form of Kuwait City:

i) Segregation of Kuwaitis and non-Kuwaitis was established (by the Government and not by the Plan), with the creation of major new neighbourhood blocks (A to Q on Fig. 7.8) to which Kuwaitis only were transferred as the reconstruction of the Old City proceeded during the 1950s. Less formal plans were laid for the expansion of Hawalli and Salimiya, later to become important areas of residence for non-Kuwaitis (see Chapter 9).

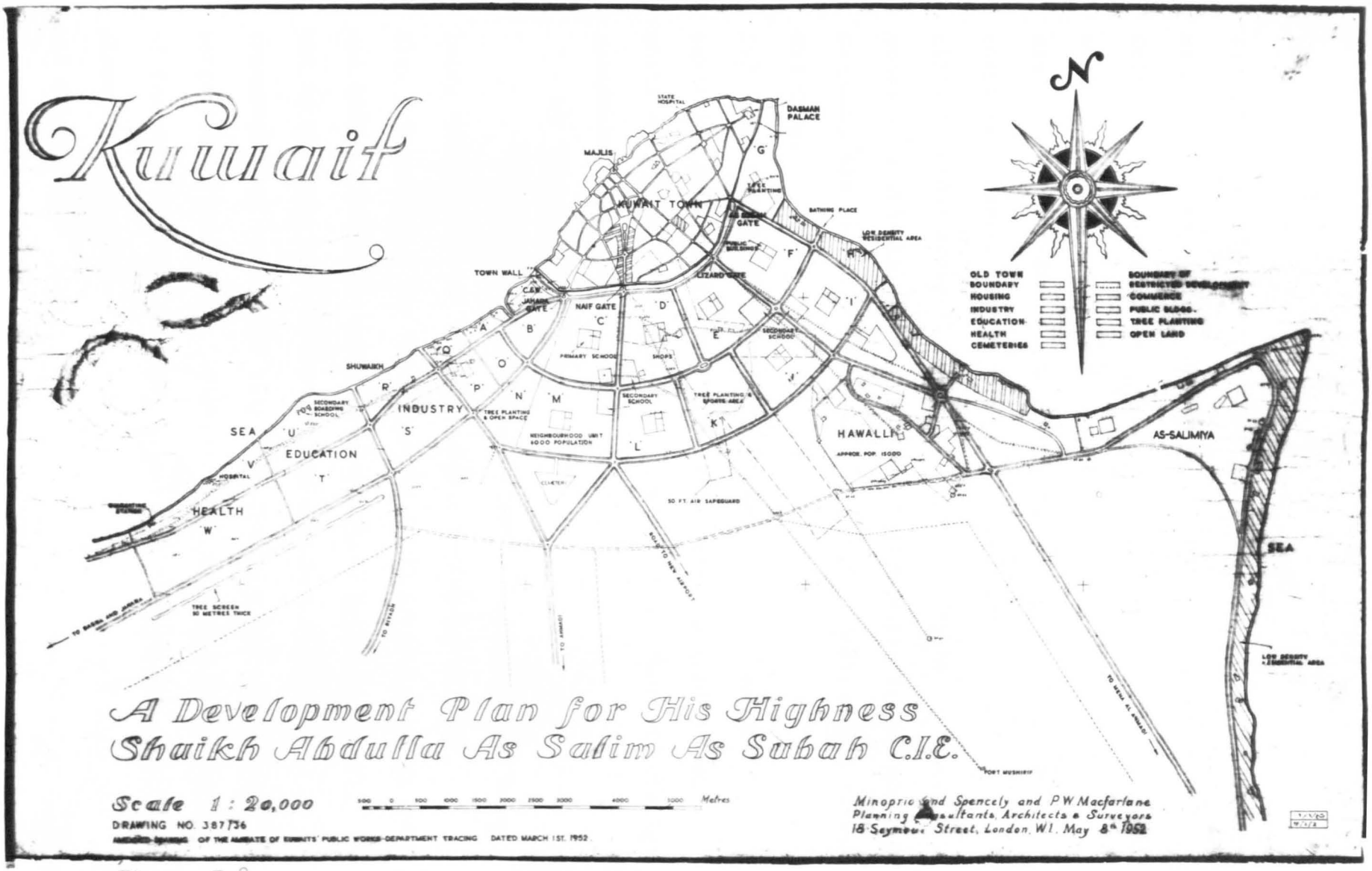

Kuwait
A Development Plan for His Highness
Shaikh Abdulla As Salim As Subah C.I.E.
KUWAIT TOWN
MAJLIS
DASMAN PALACE
STATE HOSPITAL
TOWN WALL
SEA GATE
JAHARA GATE
NAIF GATE
LAND GATE
BATHING PLACE
LOW DENSITY RESIDENTIAL AREA
SHUWAIKH
INDUSTRY
EDUCATION
HEALTH
HAWALLI
AS-SALIMIYA
SEA
PRIMARY SCHOOL
SECONDARY SCHOOL
SHOPS
TREE PLANTING & SPORTS AREA
TREE PLANTING & OPEN SPACE
NEIGHBOURHOOD UNIT 4000 POPULATION
50 FT. AIR SAFEGUARD
TREE SCREEN 30 METRES THICK
TO BASRA AND BAGHDAD
TO RIYADH
TO AHMADI
TO KUWAIT NEW AIRPORT
TO SEIF AL AHMAD
PORT MUSHRIF
OLD TOWN BOUNDARY
HOUSING
INDUSTRY
EDUCATION
HEALTH
CEMETERIES
BOUNDARY OF RESTRICTED DEVELOPMENT
COMMERCE
PUBLIC BLDGS.
TREE PLANTING
OPEN LAND
Scale 1 : 20,000
DRAWING NO. 387/36
Minoprio and Spencely and P.W. Macfarlane
Planning Consultants, Architects & Surveyors
18 Seymour Street, London, W1. May 8th 1952

Figure 7.8

ii) The Old City was scheduled for wholesale redevelopment as a modern city centre serving all of "Greater Kuwait". Only secondary consideration was given to residential accommodation within the wall.

iii) Throughout the built-up area the road system was to comprise a series of radial dual-carriageways with semi-circular cross connections, together with a system of minor roads in a broadly rectangular layout within the new neighbourhoods. Overall, the traffic system was to be highly centralized on the Old City.

iv) Each new neighbourhood was to have a selection of centrally located services - schools, shops, mosques, etc. - which were designed to meet the local needs of that district's residents.

b) Physical Expansion

Once the guidelines of future urban growth had been laid, construction of the new suburbs proceeded rapidly. Fig. 7.9 indicates the extent of the built-up area between 1936 and 1967. Initially suburban development took precedence, but in the late 1950s attention was directed towards the transformation of the Old City, particularly the erection of large public buildings. Shiber (1964) describes this period of frenetic building activity in detail; construction followed planning with unprecedented haste. Plates 7.6 - 8 show the Old City in 1960, 1964, and 1967, indicating a picture of apparent

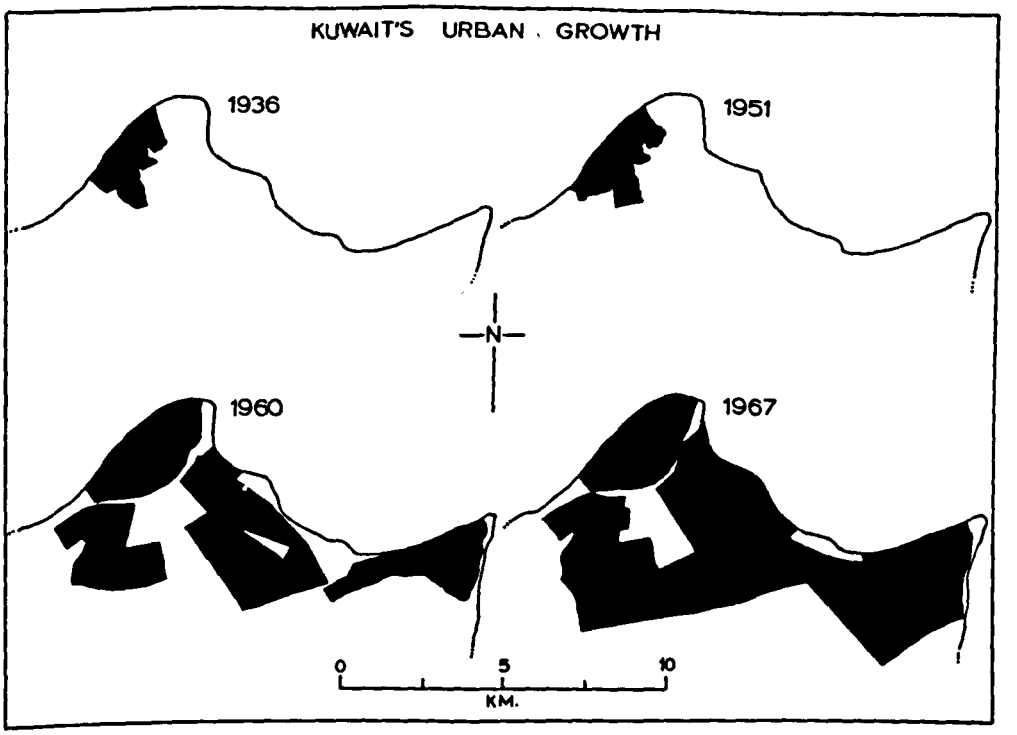


Figure 7.9

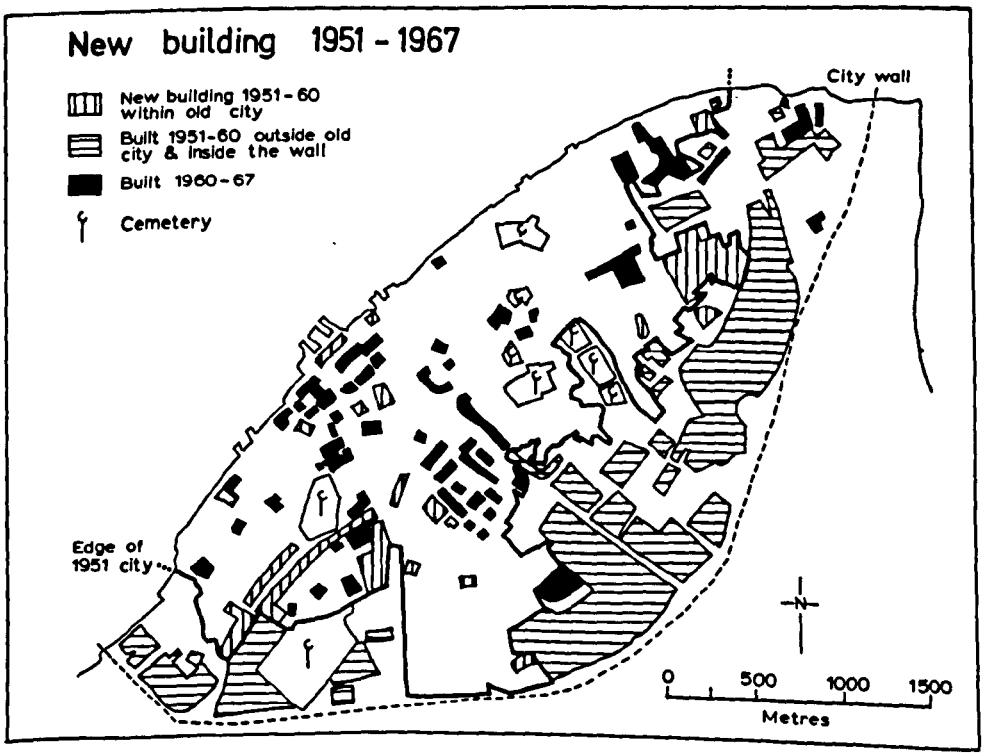


Figure 7.10

Plate 7.6 Aerial View of the Old City in 1960.

photo : Hunting Aerosurveys Ltd.

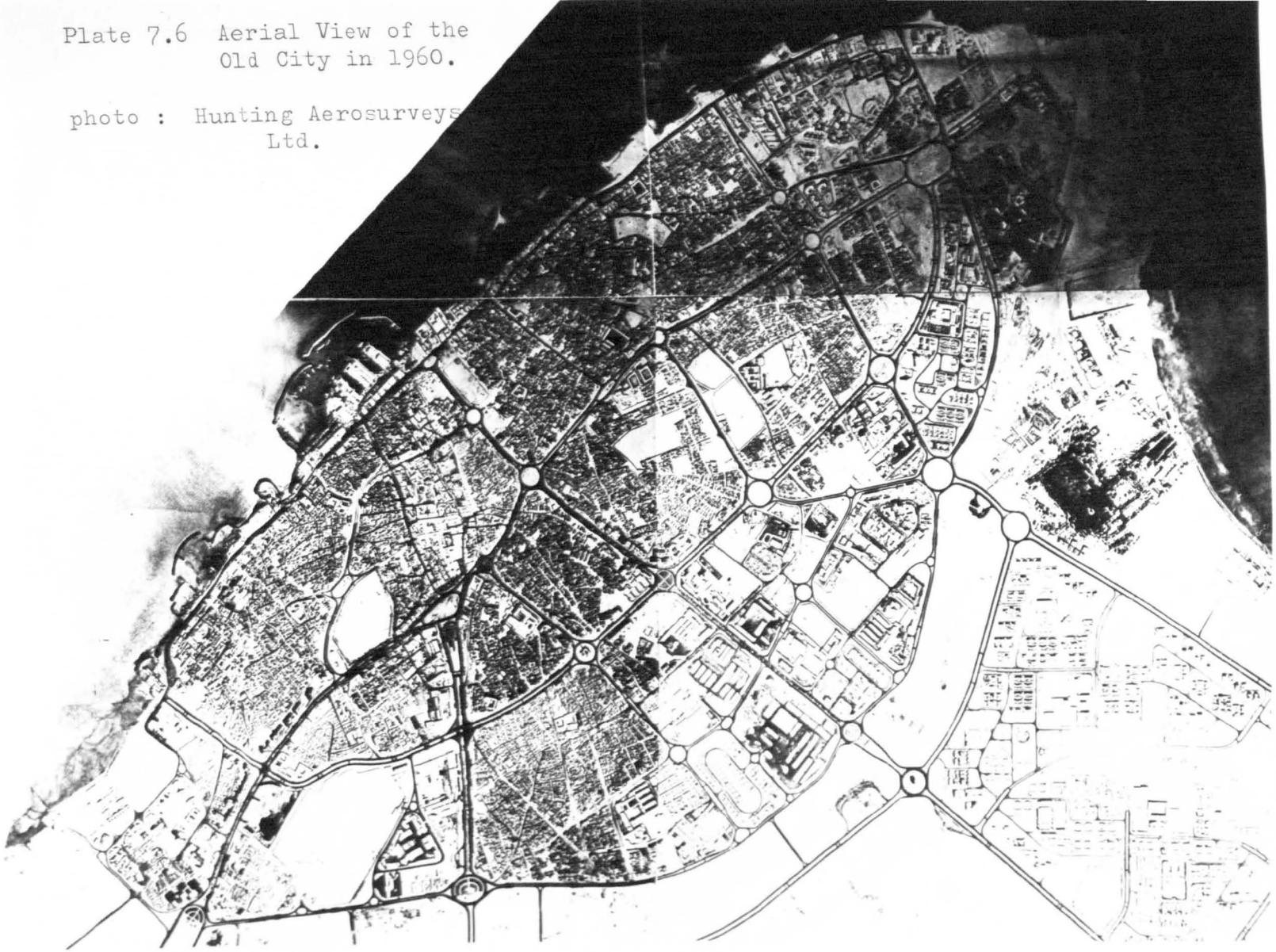


Plate 7.7 Aerial View of the Old City in 1964. photo: Hunting Aerosurveys Ltd.

Plate 7.8

Aerial View of the
Old City in 1967.

photo: Hunting Aerosurveys Ltd.

havoc and desolation. Most of the Old City in its original form is to disappear, but one recent report (Azzam, Buchanan & Thysse, 1965, p.10) strongly criticises this replacement of the Old City with medocre new buildings.

Within the Old City, as Fig. 7.10 shows, building took place in the open spaces bordering the built-up areas of the 1951 City before urban renewal began on a large scale within the City itself. Parts of Mirqab (Fig. 7.1) were quickly appropriated for the Ministry of Public Works, while commercial development in Salihiya began in the late 1950s and early 1960s. Only in the mid-1960s were extensive inroads made into the rebuilding of the centre of the Old City where new commercial centres are at present emerging on the seaward side of the Suq, opposite the Saif Palace. A substantial concentration of public buildings - the Ministries of Social Affairs & Education - is emerging in "Commercial Area 9" immediately to the east of Safat Square.

With some of the new suburbs up to 10 km from the city centre, new problems of movement have arisen within Kuwait's built-up area. In 1966, 80,331 private cars and a further 14,577 public vehicles were registered in the State, amounting to about one vehicle per household. As a result, traffic problems have reached significant proportions in parts of the Old City and at major intersections.

The advice of another firm of consultants has been sought on these and related problems. Future urban planning is likely to be closely co-ordinated with plans for the expansion of the economy as a whole, and since industrial diversification is a major goal of this expansion, the development of a heavy industrial area in south Kuwait is of some importance in the location of new residential areas. Until recently Ahmadi was the only town of over 10,000 inhabitants in south Kuwait. Plates 7.9 and 7.10 illustrate the rapid genesis of Ahmadi from a mere oil company camp to a fully fledged town at present approaching 20,000 in population. Fahahil has experienced a swift population increase from 8,923 in 1957 to 20,782 in 1965. Shuaiba too, designated a future industrial area with its commercial port, oil refinery, and petro-chemical plants, is also expanding rapidly both in population and the extent of its built-up area. As yet, the new town of Sabahiya between Ahmadi and Fahahil has not emerged as a physical reality. Thysse's recommendations have an important bearing on the balance between developments in south Kuwait and in the capital.

c) Subsequent Plans

Whilst Kuwait's urban expansion was almost unfettered throughout the 1950s, by the early 1960s almost all of the 1952 Plan's aims had been realized. With the city closely approximating to the outline shown in Fig. 7.9, outside Consultants were again asked to advise on future development. Thysse, reporting in 1962, wrote :

Plate 7.9 Ahmadi in 1946

Plate 7.10 Ahmadi in 1967: note the regular street plan and the gardens.

> "My expectations of a large population in Kuwait City are not very high. The population number will not be very much increased and consequently in the near future Kuwait City will not grow very much larger than its present size." (Thysse, 1962, p.10).

Instead, accent was laid on the industrial and residential development of south Kuwait, centred on the Ahmadi - Fahahil - Shuaiba complex. This aspect of Thysse's recommendations is nearer fulfilment than his recommendations concerning Kuwait City for two main reasons :

i) Thysse clearly overestimated Kuwait's potential for industrial growth. While he attributed most of Kuwait City's "propulsion" to the building industry (Thysse, 1962, p.9), as Chapter 4 has shown, Kuwait's major employment category is the provision of services. Ahmadi's future industrial development is unlikely to alter this service bias of the economy for several years.

ii) The volume of immigration to Kuwait is almost unpredictable. Thysse could not have foreseen the political upheaval of June 1967 and its effect on Kuwait's total population growth (see Chapter 5). As indicated below (Chapter 9), the immigrants show a marked preference for Kuwait City.

The most recent town planning consultants' report concentrated on the need for a comprehensive Master Plan, emphasizing the poor architectural standards in Kuwait and the

seriousness of traffic problems, especially in the Old City (Azzam, Buchanan & Thysse, 1965). At present Buchanan & Partners are working on the formation of an overall Master Plan, but its effect on the form and functioning of the present-day city are as yet negligible.

V. THE CONTEMPORARY CITY

Overall, urban centres in Kuwait today (Fig. 7.10) represent the outcome of nearly 20 years of controlled development. Kuwait, more than most states, has an almost completely planned environment. What does this environment comprise?

a) The Old City

Most of the Old City has been purchased by the Government (Fig. 7.3), razed and re-developed. Parts of the 1951 city remain (Plate 7.8), including sections of Sharq, Mirqab, and the suq. Elsewhere, most of the street facades comprise modern concrete buildings even though the areas behind are as yet undeveloped. Notable additions include Fahad as-Salim Street (Plate 7.11) - an entirely new shopping district specializing in "modern" shops (see Chapters 10 & 11); several commercial centres near the suq; a banking district on the seaward side of the suq; and a Government Administration concentration based on the Ministry of Public Works Compound in the south-east section of the city near the Shaab gate (Fig. 7.1). Throughout the Old

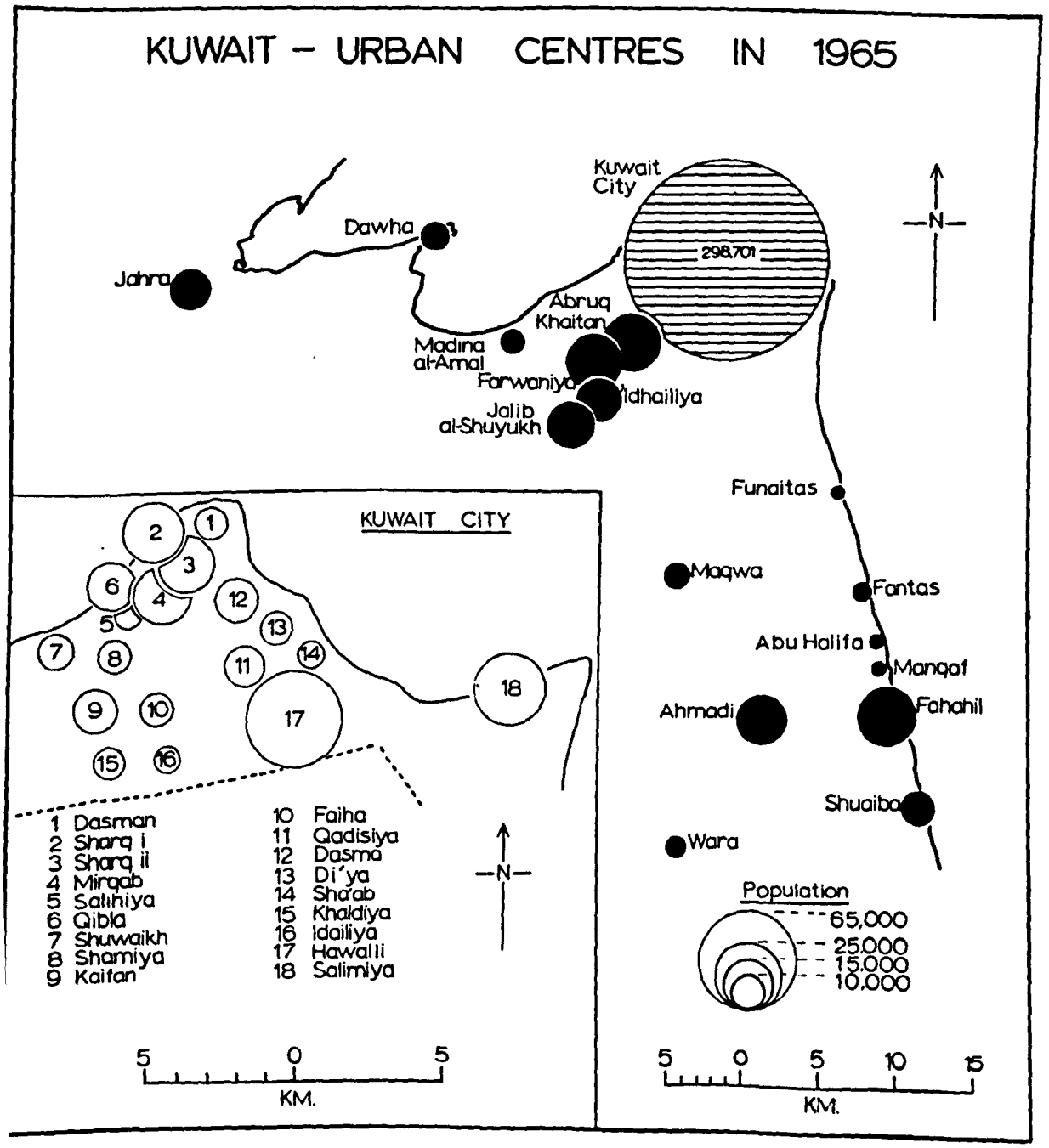

KUWAIT – URBAN CENTRES IN 1965
Kuwait City
298,701
Dawha
Jahra
Abruq Khaitan
Madina al-Amal
Farwaniya
Idhailiya
Jalib al-Shuyukh
N
Funaitas
Maqwa
Fantas
Abu Halifa
Manqaf
Ahmadi
Fahahil
Shuaiba
Wara
KUWAIT CITY
1 Dasman
2 Sharq i
3 Sharq ii
4 Mirqab
5 Salihiya
6 Qibla
7 Shuwaikh
8 Shamiya
9 Kaifan
10 Faiha
11 Qadisiya
12 Dasma
13 Di'ya
14 Sha'ab
15 Khaldiya
16 Idailiya
17 Hawalli
18 Salimiya
Population
65,000
25,000
15,000
10,000
5 0 5
KM.
5 0 5 10 15
KM.

Figure 7.11

Plate 7.11 Fahad as-Salim Street looking eastwards from the Jahra gate.

Plate 7.12 Kuwait City: note the high-rise buildings in the city centre and the new corniche.

City, wide dual-carriageways have replaced the old lanes, and on the seaward side a corniche road in course of further enlargement has radically altered the seaward face of the city.

b) The Kuwait Neighbourhoods

Much of these suburbs comprise roughly rectangular blocks 2 sq.km. in area built around a central square containing the neighbourhood service centre (supermarket, mosque, medical clinic, social centre, schools, and a parade of shops). Houses are built on 750 or 1,000 sq.m. lots from concrete, and are surrounded by a brick wall over 2 m. high for privacy. Despite the variety of architectural styles, an austere impression is created by the uniformity of construction materials, the formality of the road pattern, and the high surrounding walls reflecting the neighbourhoods' evolution as a result of closely controlled planning.

c) Hawalli and Salimiya

By comparison, Hawalli and Salimiya have evolved more freely since these district are permitted places of residence for non-Kuwaitis. Almost one-third (74,500) of the immigrants lived in these two districts in 1965, outnumbering the Kuwaitis by almost 3:1. Hawalli and Salimiya have a greater variety of layout (Fig. 7.1) and building styles than the other neighbourhoods because of speculative building by Kuwaitis on behalf of the immigrants.

d) Abruq Khaitan and Farwaniya

Situated beyond the continuously built-up area, these two districts have developed rapidly as dormitory towns for non-Kuwaitis. 26,000 non-Kuwaitis lived there in 1965 compared with 18,000 Kuwaitis (Census of Population, 1965, Table 1). Although formally laid out like the Kuwaiti neighbourhoods, Abruq Khaitan and Farwaniya, like Hawalli and Salimiya, have developed more freely as both residential and retail developments are less strictly controlled.

Jalib as-Shuyukh beyond Abruq Khaitan (Fig. 2.1) is largely a Badu settlement comprising older plaster buildings and hundreds of tin and rush matting huts. "Low income" houses are in course of erection.

e) Ahmadi and Fahahil

Ahmadi is a completely planned centre, but it differs in appearance from Kuwait City's neighbourhoods because of its bungalow-style of housing and the stress placed on tree and shrub planting by K.O.C. (plate 7.10). Fahahil is a marked contrast because of its untidy sprawl outwards from the core of the older fishing village. Residential developments at Shuaiba are as yet limited to huts and a few older houses.

CONCLUSION

Between 1951 and the present day Kuwait City (and other urban areas to a lesser extent) have expanded over the

surrounding desert with unprecedented haste. This Chapter traced several important results of this period of rapid transition.

i) Clearly "Greater Kuwait" (the Old City, together with its new suburbs within the fourth ring road) has evolved as an almost entirely planned unit based on the 1952 Plan.

ii) Within this overall expansion an important process of population movement and differentiation has been at work. While the Kuwaiti population of the Old City dropped from 59,579 in 1957 to 29,269 in 1965 as a result of the policy of evacuation into the new neighbourhoods, the total population has remained unchanged at 100,000 as immigrants replace the loss of Kuwaitis from the city centre. Such a process of differentation has important social and economic repercussions (Chapters 8 and 9).

iii) Despite plans for industrial and associated residential growth in south Kuwait, Kuwait City contained over three-fifths of the total State population (Fig. 7.10). Rapid urban growth has induced a high degree of centralization despite the location of the driving force behind all development (the oil industry) in south Kuwait.

CHAPTER EIGHT

POPULATION DISTRIBUTION AND DENSITY WITHIN THE URBAN AREAS

Introduction

Kuwait's population has never been widely scattered over a rural area (Chapter 2); instead, Kuwait City has always contained at least two-thirds of the State's total population. Indeed, at the time of Lorimer's visit, 35,000 people lived in the City compared with a total population of 37,000. Little change in this highly concentrated pattern of distribution was registered up to the 1950s when oil and associated developments in south Kuwait began to produce sizeable population agglomerations beyond the built-up area of Kuwait City. Fortunately much of the important period in the later 1950s and throughout the 1960s, when Kuwait City was being expanded and re-built, and when the Ahmadi-Fahahil complex was emerging, is covered by the three Censuses of Population in 1957, 1961, and 1965. These statistics provide us with the information required to consider changes in the overall population distribution; the hierarchy of centres in Kuwait; and density gradients within the urban areas.

I. CHANGING PATTERNS OF POPULATION DISTRIBUTION

a) Before the First Census

At the beginning of the century the area tributary to the Shaikh of Kuwait's suzerainty (roughly equivalent to the

area of the modern State, excluding some date gardens at Fao) contained 37,000 people with an additional 13,000 migratory Badu. Of the 37,000, 35,000 lived in Kuwait City. Jahra was the only other centre of any size, containing 500 people - swollen in summer to 700 by the incursion of nomads. Eight smaller settlements were recognized, all of them smaller than Jahra - Qasr as - Sabiyah; Failaka; Dimnah (called Salimiya from 1953 onwards); Sirrah; Fahahil; Fantas; Abu Halifa; and Shuaiba (Lorimer, 1908, p.1074; and see Fig. 2.1).

This pattern of population distribution - highly centralized in Kuwait City with very minor population concentrations on the east coast and at Jahra - was preserved until the post-1946 period. Chapter 7 has indicated how Kuwait City grew steadily between 1908 and 1946; because of the exceptional factors affecting this growth (see Chapters 3 and 4), it is most unlikely that any other centre apart from Kuwait City experienced any notable increase in the first half of the twentieth century.

b) Effects of Oil Discoveries

Up to 1946 K.O.C.'s labour force did not exceed 300 (Table 3.2), but in the post-war period labour needs rose sharply from 1,552 in 1946 to almost 8,000 in 1950. As indicated in Chapter 4, most of the labour force and its dependents resided and worked in south Kuwait, first at Maqwa and then finally at Ahmadi, the present-day base of all K.O.C.'s activities.

Initially, the numbers of dependents were small (see Chapter 5 for details), since the census population of Ahmadi in 1957 was only 7,280 compared with K.O.C.'s total labour force of 9,038 for the same year (Table 4.2). Fahahil, with a population of 8,923 in 1957, undoubtedly benefitted from the discovery of oil in south Kuwait, but together with Ahmadi the growth of these centres constituted the first major shift in the population distribution since the predominance of Kuwait City had been established almost two centuries earlier (Chapter 3).

c) Population Distribution in 1957

Fig. 8.1 illustrates the results of the first population Census. As well as the decentralization effect which the oil industry had on population distribution, another powerful force which caused a marked re-adjustment of population was the re-construction in the Old City. As Chapter 7 has shown, new suburbs were quickly laid out and constructed acccrding to the design recommended by the first Master Plan, while at the same time work began apace on the wholesale reconstruction of the Old City within the wall.

While the distribution of the total population in 1957 conforms to an apparently straightforward pattern (Fig. 8.1), population movements within Kuwait are complex. Two factors are of prime significance :

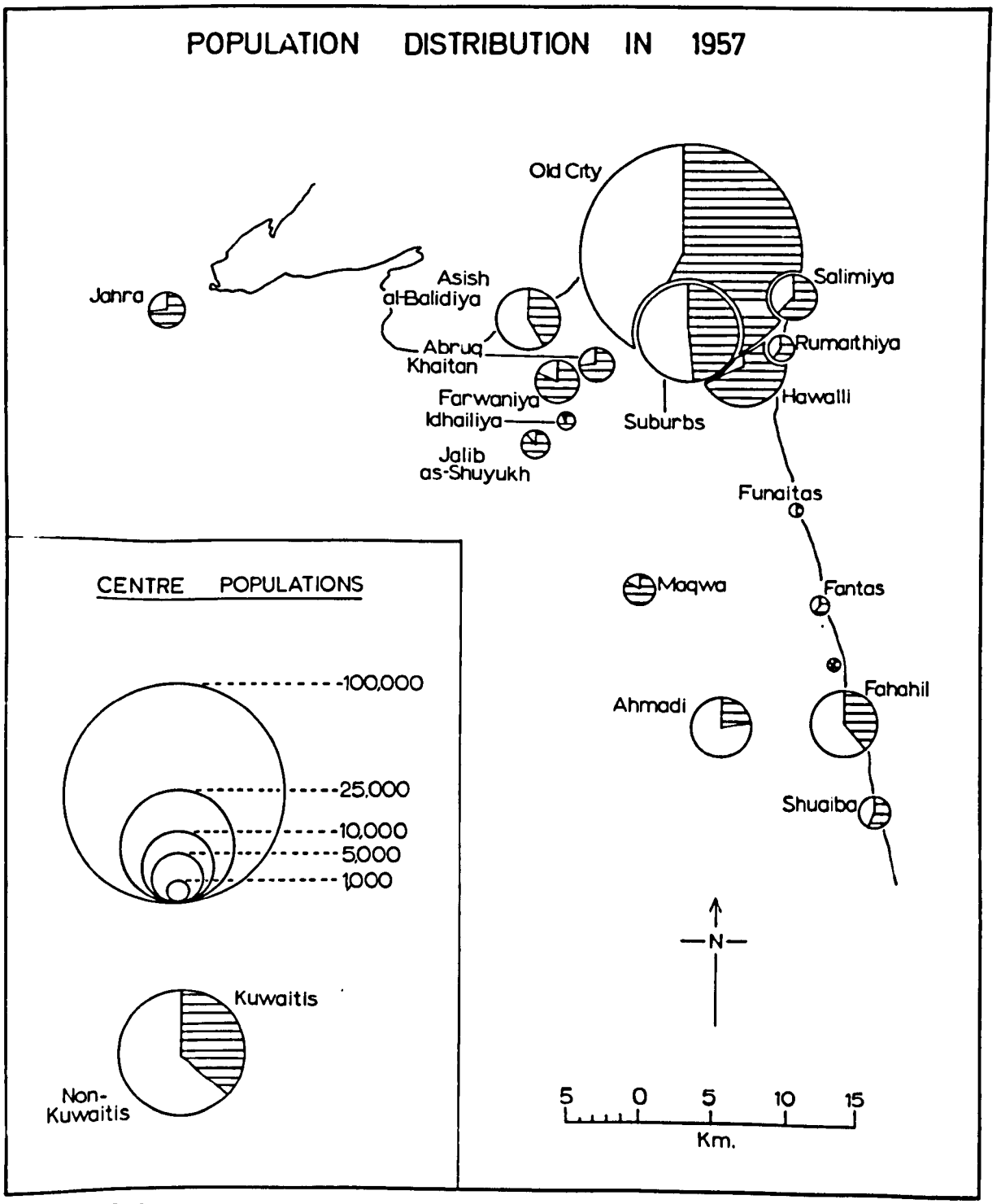

POPULATION DISTRIBUTION IN 1957
Old City
Jahra
Asish al-Balidiya
Salimiya
Abraq Khaitan
Rumaithiya
Farwaniya
Idhailiya
Jalib as-Shuyukh
Suburbs
Hawalli
Funaitas
Maqwa
Fantas
Fahahil
Ahmadi
Shuaiba
CENTRE POPULATIONS
100,000
25,000
10,000
5,000
1,000
Kuwaitis
Non-Kuwaitis
N
5 0 5 10 15
Km.

Figure 8.1

i) As shown in Chapter 7, most of the new suburbs were reserved for Kuwaitis only. Hence the evacuation of the Old City was a movement involving Kuwaitis only, while most of the new immigrants continued to flock into the city centre.

ii) Rapid increases in the volume of immigration throughout the 1950s (Chapter 5) coupled with Kuwait's strict nationality laws produced a dualism in population distribution preserved until the present day (Fig. 8.2). Much of the homogeneity of the population was lost, since aliens and citizens possessed contrasting demographic characteristics (Chapter 6) and different places of residence (see Chapter 9).

A measure of the magnitude of these factors is provided by Table 47 of the 1957 Census which lists Kuwaitis and non-Kuwaitis separately by place of birth and place of enumeration. Figs. 8.3 and 8.4 have been constructed from this table. Clearly shown is the movement outwards into the suburbs of Kuwaitis born inside the Old City; altogether, 32,962 Kuwaitis were involved in this movement while 55,126 remained within the Old City - their place of birth (Census of Population, 1957, Tables 47a and b). Only 3,327 Kuwaitis born in the Old City moved to Ahmadi or Fahahil before 1957; evidently the capital in its new form provided too many attractions (both housing facilities and employment opportunities) to cause any significant volume of out-migration to south Kuwait.

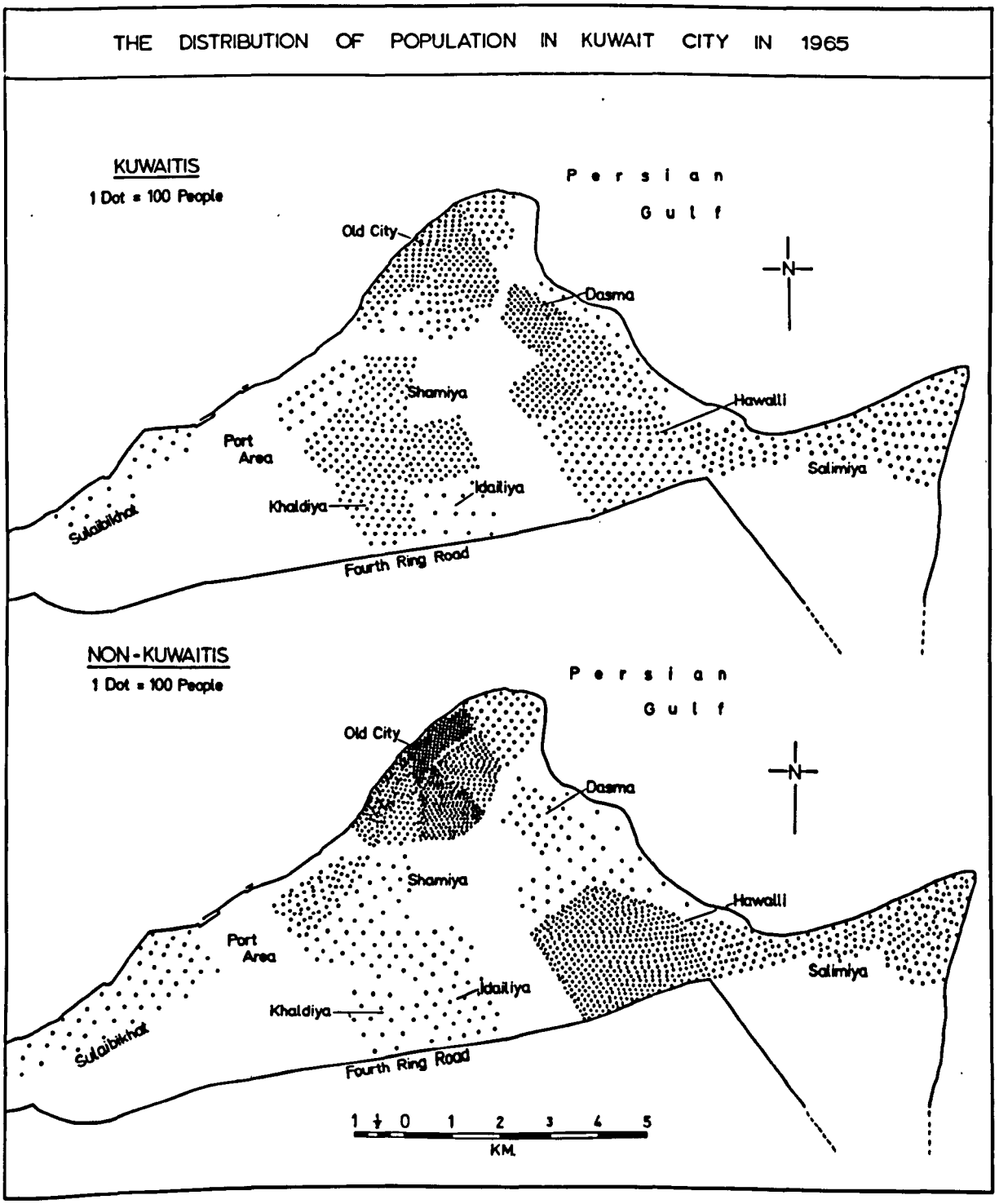

THE DISTRIBUTION OF POPULATION IN KUWAIT CITY IN 1965
KUWAITIS
1 Dot = 100 People
Persian Gulf
Old City
Dasma
N
Shamiya
Hawalli
Port Area
Salimiya
Idailiya
Khaldiya
Sulaibikhat
Fourth Ring Road
NON-KUWAITIS
1 Dot = 100 People
Persian Gulf
Old City
Dasma
N
Shamiya
Hawalli
Port Area
Salimiya
Idailiya
Khaldiya
Sulaibikhat
Fourth Ring Road
1 ½ 0 1 2 3 4 5
KM

Figure 8.2

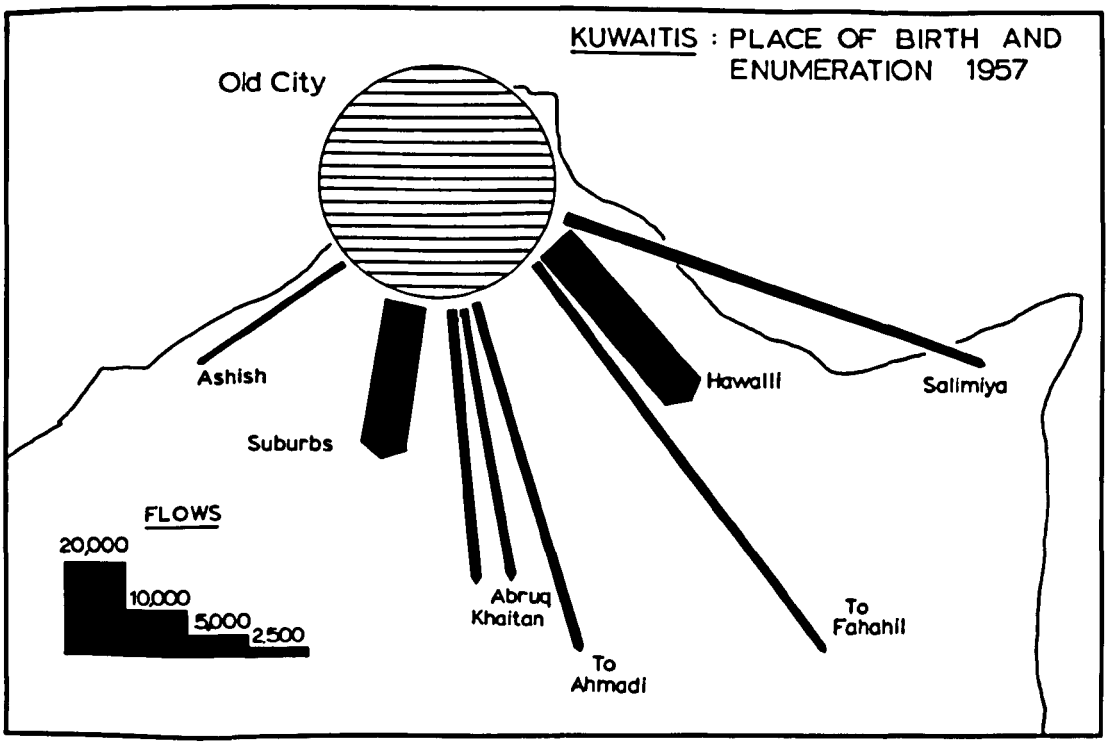


Figure 8.3

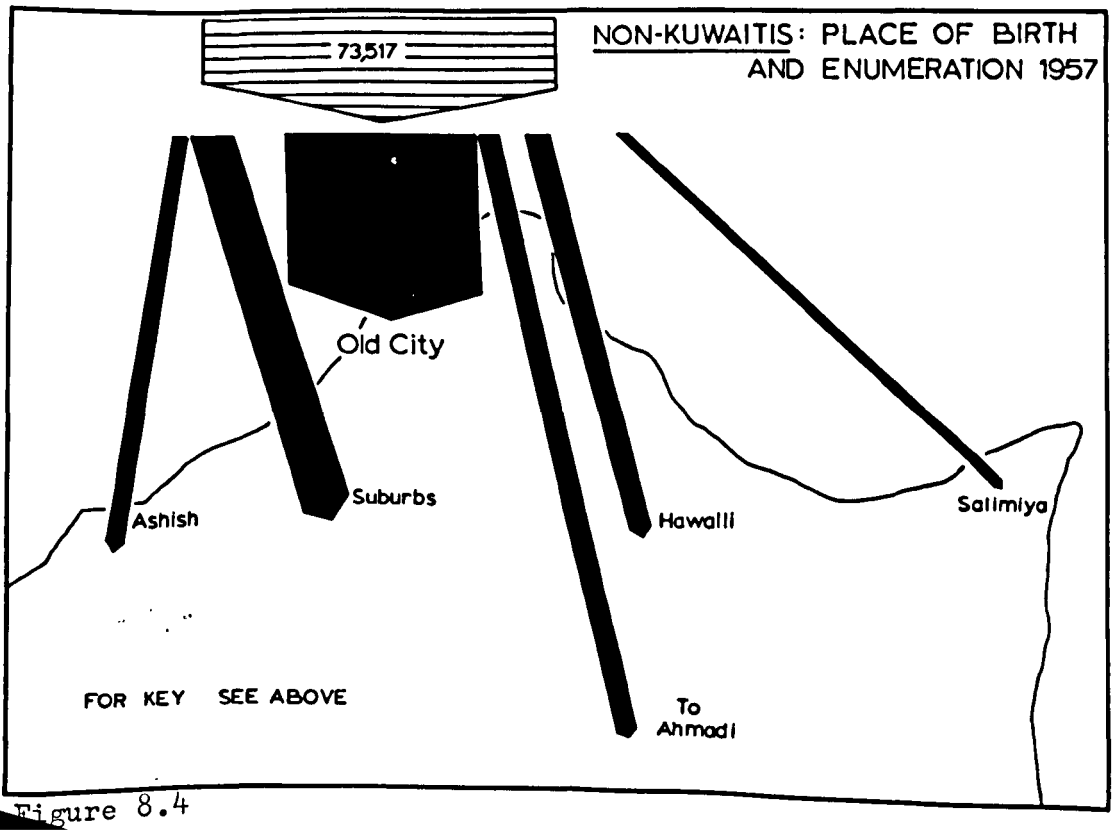


Figure 8.4

By comparison, the non-Kuwaitis showed a much more diverse pattern of movement within Kuwait. Of the total of 83,548 non-Kuwaitis shown in Tables 46j and d, 38,888 resided in the Old City. Only 2,153 of these residents had been born in the Old City, so that this district of Kuwait was the most popular single target with incoming migrants. As Fig. 8.4 shows, other popular centres for migrants born outside Kuwait were the new suburbs (10,298 non-Kuwaitis lived there in 1957); Fahahil and Ahmadi (9,615); Hawalli (4,302); Ashish al-Baladiya (3,756); and finally Salimiya (1,421). The high proportion of non-Kuwaitis residing in the suburbs (10,298) is misleading; most of these people were male Iranis and Iraqis (4,488) employed as labourers in the construction of the new suburbs and living in huts on-site. Ashish al-Baladiya comprised a shanty town hastily erected to hold the large numbers of migrant workers flocking into Kuwait during the early 1950s (Chapter 5).

Fig. 8.1 summarizes the distribution of population in 1957 resulting from these movements and expresses the proportion of each centre which was composed of non-Kuwaitis (immigrants).

d) Population Distribution in 1965

As Fig. 7.10 shows, by 1965 Kuwait City entirely dominated the population distribution of Kuwait with 298,701 out of the total of 467,339 people living in the area of "Greater Kuwait" (the continuously built-up area within the

area circumscribed by the fourth ring road - Fig. 8.2). Particularly interesting is the rapidity of the expansion of the areas not specifically reserved for Kuwaitis. Immigration has added proportionately more to the total population than natural increase (Chapters 5 and 6) and as a result residential areas open to non-Kuwaitis have sustained a high rate of growth in the inter-censal period 1957-1965. Particularly noticeable in this context is the growth of Salimiya (4,075 to 38,648 from 1957 to 1965); Hawalli (14,784 to 54,542); Fahahil (8,923 to 20,782); Abruq Khaitan (2,153 to 23,610); and Farwaniya (3,261 to 20,444) - Table 8.1. These latter two centres have acted as "overspill" towns for Kuwait City because of their location just 4 km south of the fourth ring road (Fig. 2.1).

With heavy immigration continuing in the post-1956 period (Chapter 6), these centres are likely to have experienced further large population increases while the populations of the exclusively Kuwaiti neighbourhoods are more likely to remain almost constant. No statistics are available on the place of residence of non-Kuwaiti immigrants arriving after 1965, but further overall increases will probably exaggerate the dichotomy in the physical and social attributes of the Kuwaiti and non-Kuwaiti districts (see below and Chapter 9 for details).

Table 8.1 THE RANK OF CENTRES IN KUWAIT

Rank	1957 Place	1957 Population	1961 Place	1961 Population	1965 Place	1965 Population
1	City *	104,551	City *	96,860	City *	99,609
2	Suburbs *	21,378	Hawalli & Niqra *	37,673	Hawalli *	64,542
3	Hawalli & Niqra *	14,784	Salimiya *	19,350	Salimiya *	38,648
4	Fahahil	8,923	Fahahil	14,648	Abruq Khaitan	23,610
5	Ahmadi	7,280	Dawha	14,231	Fahahil	20,782
6	Ashish	6,879	Ahmadi	12,860	Parwaniya	20,444
7	Salimiya *	4,075	Sulaibikhat	10,080	Ahmadi	18,719
8	Farwaniya	3,261	Kaifan *	9,323	Jalib Ash-Shuyukh	15,263
9	Jahra	2,436	Abruq Khaitan	8,704	Idhailiya	14,369
10	Abruq Khaitan	2,153	Dasma *	8,294	Kaifan *	13,465
11	Shuaiba	1,819	Farwaniya	7,487	Dasma *	13,013
12	Maqwa	1,793	Faiha *	7,264	Qadisiya *	10,480
13	Jalib-Ash Shuyukh	1,417	Shamiya *	6,267	Jahra	10,356
14	Ras & Rumathiya	1,334	Qadisiya *	5,770	Faiha *	9,655
15	Fantas	1,061	Amqara	4,919	Shuwaikh *	9,084
16			Jahra	4,747	Di'ya *	7,426
17			Di'ya *	4,718	Shamiya *	7,265
18			Maqwa	3,889	Sulaibikhat	6,971
19			Shuwaikh *	3,642	Khaldiya *	6,679
20			Shuaiba	2,892	Shuaiba	6,855
21			Wara	2,534	Dawha	5,219
22			Jalib Ash-Shuyukh	2,445	Maqwa	5,134
23			Jabria	2,336	Shaab *	4,650

Table 8.1 (Contd.)

	1957		1961		1965	
Rank	Place	Population	Place	Population	Place	Population
24			'Idhailiya	2,297	'Idhailiya	3,782
25			Shaab	1,929	Madina al-Amal	3,583
26			Madina al-Amal	1,685	Jabria	3,426
27			Fantas	1,323	Wara	2,159
28			Mishrif	1,221	Fantas	2,055
29					Abu Halifa	1,283
30					Funaitis	1,263
31					Manqaf	1,143
State Population	TOTAL :	206,473	TOTAL :	321,621	TOTAL :	467,339

* Indicates that the centre is included within "Greater Kuwait"

Calculated from : i) Census of Population, 1957, Table 1
ii) Census of Population, 1961, Table 2
iii) Census of Population, 1965, Table 1

II. SIZE AND SPACING OF CENTRES

a) Theory

Regularities observed in the relationships between a centre's size and the number of centres in a certain size category, the "Rank-Size rule", have occupied the attention of many writers such as Auerbach (1913), Duncan (1957), Haggett (1965), Stewart (1958), and Zipf (1949), to name but a few. World-wide applications of this empirically-derived "rule" have confirmed its international applicability and at the same time raised some important exceptions (Berry 1961; Gunawardena 1964). How does the rule apply to the size and number of centres in Kuwait?

The rule states that when the frequency distributions of towns and their sizes are plotted on double-logarithmic graph paper the relationship between the two elements will be a straight line. Stewart (1958) considered the rationale underlying this relationship and suggested reasons for the departure of certain distributions from the norm, including level of economic development. Since Kuwait's distribution is far from normal (Fig. 8.5), Berry's authoritative statement on the reasons for such departures warrants close attention.

After studying the rank-size relationships of 4,187 cities in 38 countries, Berry concluded that log-normal distributional patterns were the product of urbanization in countries which :

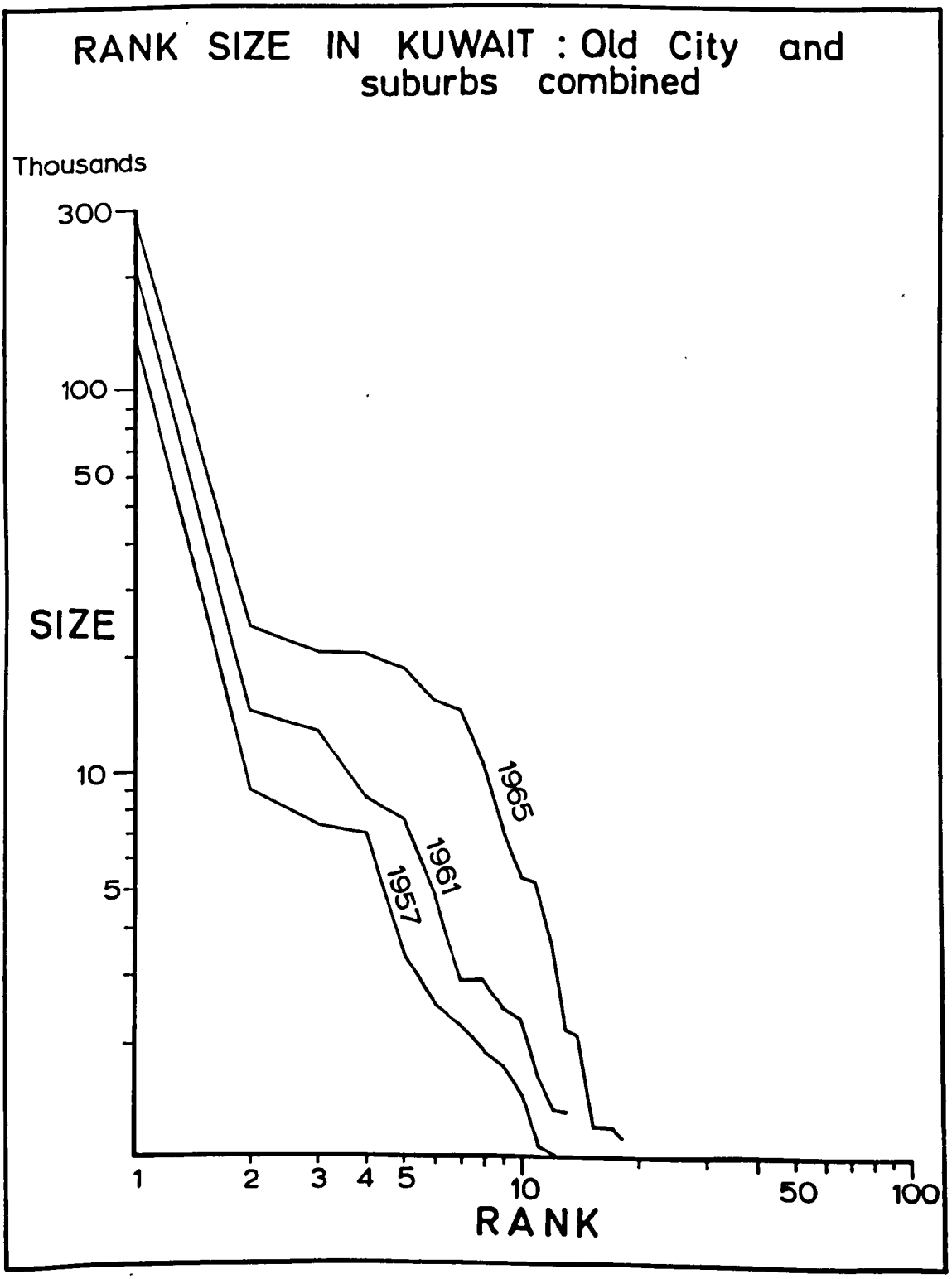

RANK SIZE IN KUWAIT : Old City and suburbs combined
Thousands
300
100
50
SIZE
10
5
1965
1961
1957
1
2
3
4
5
10
50
100
RANK

Figure 8.5

i) are larger than average;

ii) have a long history of urbanization;

iii) and which are economically and politically complex.

Hence, patterns varying from the log-normal distribution can be expected in countries which are :

i) smaller than average;

ii) have a short history of urbanization;

iii) and are economically and politically simple.

b) Rank-Size in Kuwait

As described above, Kuwait's cluster-size distribution is strongly primate; Kuwait City in 1965 was over 12 times the size of the next largest centre (Table 8.1 and Fig. 8.5). Comparison of the same centres in 1957, 1961, and 1965 indicates an interesting trend towards "normality" as centres such as Abruq Khaitan, Farwaniya, and Fahahil grow in size to fill the vacuum in the 20,000 to 200,000 size class (Fig. 8.5).

Clearly, the three reasons given above, which Berry has derived, go some way towards explaining Kuwait's primate development. Undoubtedly, the small size of the total State area (16,000 sq.km. excluding the Neutral Zone) means that the whole area can be successfully serviced and administered from one major centre. Secondly, as Chapters 2 and 3 showed, the history of urbanization in Kuwait is relatively short, dating only from the late eighteenth or early nineteenth century. This explanation is complicated a

little by the presence of immigrants in Kuwait from areas with some of the longest urban traditions in the world, e.g. Iraq.

Finally, as Chapter 4 showed, Kuwait's economy is simple in the sense that most of the State income is derived from one source - oil revenues and taxes. However, operationally, Kuwait's economy is as complex as many surrounding states with more diverse sources of income. Similarly, political simplicity, like economic simplicity, is an equally ambiguous term which Berry unfortunately fails to fully explain.

c) Rank-Size : further considerations

While the example of Kuwait does not contradict Berry's generalizations on rank-size abnormalities, the three reasons given fall short of a totally satisfactory explanation. Rank-size is functionally an extension of the notions on hierarchies (Haggett 1965, Chapter 5), in turn part of general systems theory. Well-established relationships between the size of settlements and the number and range of their central functions are commonly accepted (see Berry 1967, Chapter 2, for details) and several aspects of the hierarchy in Kuwait have a special bearing on the rank-size distribution. Six factors can be recognized :

i) Kuwait has no widely dispersed rural population requiring services at the local level. Indeed, it is doubtful whether Kuwait ever possessed rural dwellers apart from a few hundred desert-Badu.

ii) A high level of affluence has produced a network of fast roads in the State. An essential part of the hierarchy is the links between its various levels; with movement in such directions facilitated by the communication system some "sapping" of the role of medium-order centres is bound to occur (see Chapters 10 and 11).

iii) Travel in Kuwait is extremely cheap for a gallon of petrol costs only K.D. 0.50, thus making communication between centres again relatively easy.

iv) Kuwait City's location near the centre of the total State area facilitates its control over all aspects of services and administration to the detriment of all other centres.

v) Water, an essential for all life, is only available in certain centres in Kuwait, primarily in Kuwait City.

vi) Finally, the peculiarities of the oil industry (Chapter 4) with its high revenue and low labour needs has focused both money and population in the capital city where tertiary sector developments have reached their full effloresecence (see Chapters 4 and 11).

Overall, Berry's general reasons, coupled with these more specific explanations, together explain Kuwait's urban primacy. It may be that with continuing immigration Abruq Khaitan and Farwaniya will grow rapidly and thus bring Kuwait's rank-size closer to the expected "norm". In this case the rule will have been shown to have a high degree of predictive utility.

There is one further possibility explored in Fig. 8.6. Suppose that Kuwait City within the fourth ring road is regarded as a semi-closed system, i.e. that the city operates as a unit both generating needs and satisfying them in its various functional zones. In this instance we are justified in splitting the city into its constituent parts and plotting their populations according to the more usual rank-size procedure. Fig. 8.6 illustrates the near-perfect straight line relationship which results at all three census dates. Notably, at the lower limb of the graph (centres below 4,000 in size), the number of smaller centres was fewer than expected, broadly confirming Gunawardena's (1964) findings in Ceylon.

This rather surprising aspect of rank-size in Kuwait has several significant implications. The first concerns the city's interaction with other central places both within and without the built-up area and is set in the context of general systems theory. Such functional relationships between the city centre and its parts can be dealt with only in the light of the empirical movement data provided in Chapter 11; if central functions beyond the area of Kuwait City are under-provided, we can confirm our hypothesis that outlying centres are functionally similar to the suburbs of the capital.

In conclusion, it seems fair to question the validity of census boundaries in any investigation of rank-size or hierarchies

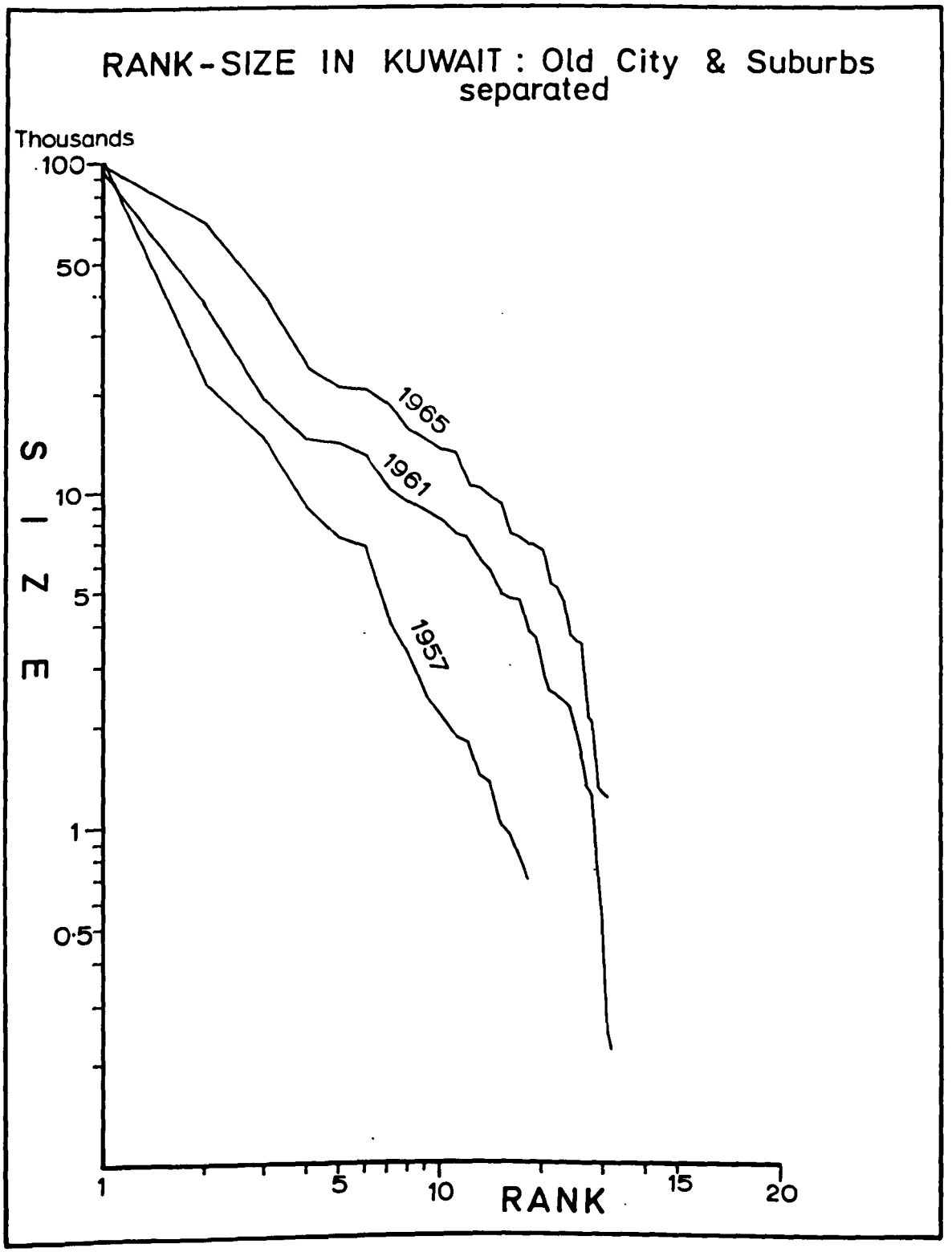

RANK-SIZE IN KUWAIT : Old City & Suburbs separated
Thousands
100
50
10
5
1
0·5
SIZE
1965
1961
1957
1
5
10
15
20
RANK

Figure 8.6

of settlement. With some judicious manipulation of census tracts, almost any distribution can become log-normal. A final answer to this problem of urban primacy can only be provided after a thorough-going consideration of central functions and their linkages in Chapters 10 and 11.

III. URBAN POPULATION DENSITIES

a) Theory

It was Clark (1951) who formally stated for the first time that urban population densities are related to densities in the city centre which are diminuted at a constant rate outwards towards the city's periphery. Berry (1963) took up Clark's initial hypothesis, confirmed its universal application from empirical evidence, and explained the underlying theoretical rationale. While density gradients were shown to decline over time for Western cities as they grew less compact, in non-Western cities density gradients remain constant despite steady increases in central densities and overall growth (Berry 1963, pp.400-405.). Berry attributes these differences first to different levels of transport evolution, suggesting that greater mobility prevails in Western than in non-Western cities, and then to differing socio-economic aspirations of the rich in Western and non-Western areas.

> "If in Western cities the poor live at the centre and the more mobile rich at the periphery, in non-Western cities the reverse is true. Any income

improvements lead to greater demands for central locations, and increased overcrowding". (Berry 1963, p.404).

Kuwait provides a useful testing ground for such theories in view of the high mobility of its population, the affluence of the population, and the special factors involved in the planning and form of the contemporary city.

a) Definitions

With virtually no rural population, all considerations of population density in Kuwait concern the density of the urban areas. Unfortunately, only Kuwait City itself is split into smaller census tracts so that a study of population density gradients is impossible outside the capital city. Overall population densities are of course available for the outlying towns and villages.

A basic problem of density determination in urban areas is the definition of the base area. In some studies, gross densities are computed (Clark 1951) while others insist on the need to consider net densities (i.e. including only the built-up area and excluding open spaces) or even persons per room (Clarke 1960). In Kuwait, gross densities (i.e. including both built-up and undeveloped land in the calculation) have been computed because of the lack of more refined measures of concentration.

Distances from the city centre have been measured as straight-line distances from Safat Square to the central point of the neighbourhood under consideration.

c) Results

Urban population densities for all the districts within Greater Kuwait (including the Old City) are listed in Table 8.2 together with distances of the districts from the city centre. No immediately recognizable progression of density decline outwards is apparent. Following Clark's (1951) method, the districts in Table 8.2 were divided into semi-circular kilometre zones extending outwards from the centre, and average densities were calculated for each zone. The resulting figures are plotted on Fig. 8.7 for both 1961 and 1965.

Clearly there is a progressive decline of densities towards the city's edge but the rate of decline is not constant. Evidently the suburbs 2-5 km from the city centre are less densely populated than Clark's model would suggest. This zone includes the planned neighbourhoods of Dasma, Shamiya, Qadisiya, Di'ya etc. (Fig. 2.1 and Fig. 7.10) with closely controlled housing density regulations (Chapter 7). Such strictures could easily explain the lower than expected densities in this zone.

Regarding density change over a period of years, Berry's predictions (1963) regarding density changes in the centres of "non-Western" cities are broadly confirmed. While the density of the Old City declined very slightly between 1957 and 1965 (in 1957 it was 12,750 people per sq.km., falling to 11,812 in 1961, and rising slightly to 12,147 in 1965), the density of the district nearest the city centre rose from 18,596 per sq.km. in 1961 to 24,147 in 1965.

Table 8.2 URBAN POPULATION DENSITIES IN KUWAIT CITY

District	Distance from City Centre (km)	DENSITIES PER SQ. KM. 1957	1961	1965
Sharq 1	0.3		18,596	24,147
Sharq 2	0.4		14,499	15,410
Mirqab	1.0		5,986	17,613
Qibla	1.3		9,534	9,296
Salihiya	1.4		31,864	5,229
Dasman	2.0		3,673	4,084
Total Old City	-	12,750	11,812	12,147
Shuwaikh	2.1	1,344 *	1,214	3,028
Dasma	2.4		5,184	8,132
Shamiya	2.8		3,133	3,632
Qadisiya	3.6		3,606	6,551
Dhi'ya	3.6		2,247	3,062
Faiha'	3.8		4,540	6,034
Kaifan	4.0		4,661	6,732
Sha'ab	4.8		964	2,325
'Idhailiya	5.2		-	688
Khaldiya	5.4		-	2,783
Hawalli	5.6	1,945	4,957	8,492
Sulaibikhat	8.0		720	498
Salimiya	10.0	244	1,069	2,135

* Figure for all "Suburbs"

Calculated from : i) Statistical Abstract, 1966, p.34.
ii) Census of population, 1957; 1961; 1965; Table 1.

As for changes in the density gradient over the years, it is difficult to be as positive as for changes in central densities. The somewhat anomalous pattern shown in Fig. 8.7 suggests that several different gradients apply within the same city. By generalizing slightly, using 3 km concentric rings instead of 1 km concentric rings, a less variable density gradient line is produced (Fig. 8.7). Between 1961 and 1965 the density gradient in Kuwait City became less steep as the city expanded outwards over the desert and as settlers moved into the new districts several kilometres from the city centre. Such a progressive decline in the density gradient (indicating a lessening contrast between the city centre and suburbs in density), Berry cites as typical of Western cities such as London (Berry 1963, p.400, Fig.7). Kuwait's density changes directly contradict Berry's generalizations on the non-Western city : "Non-western cities experience continued increases in a (overcrowding) and relative constancy of b (density gradient) - hence urban expansion without suburbanization in the Western sense".

Two explanations for Kuwait's partial deviation from the predicted pattern are possible :

i) Since Kuwait's urban expansion, including neighbourhood densities, was largely planned by British consultants (see Chapter 7), it may be that Western ideas on "suburbanization" have been superimposed on an oriental city.

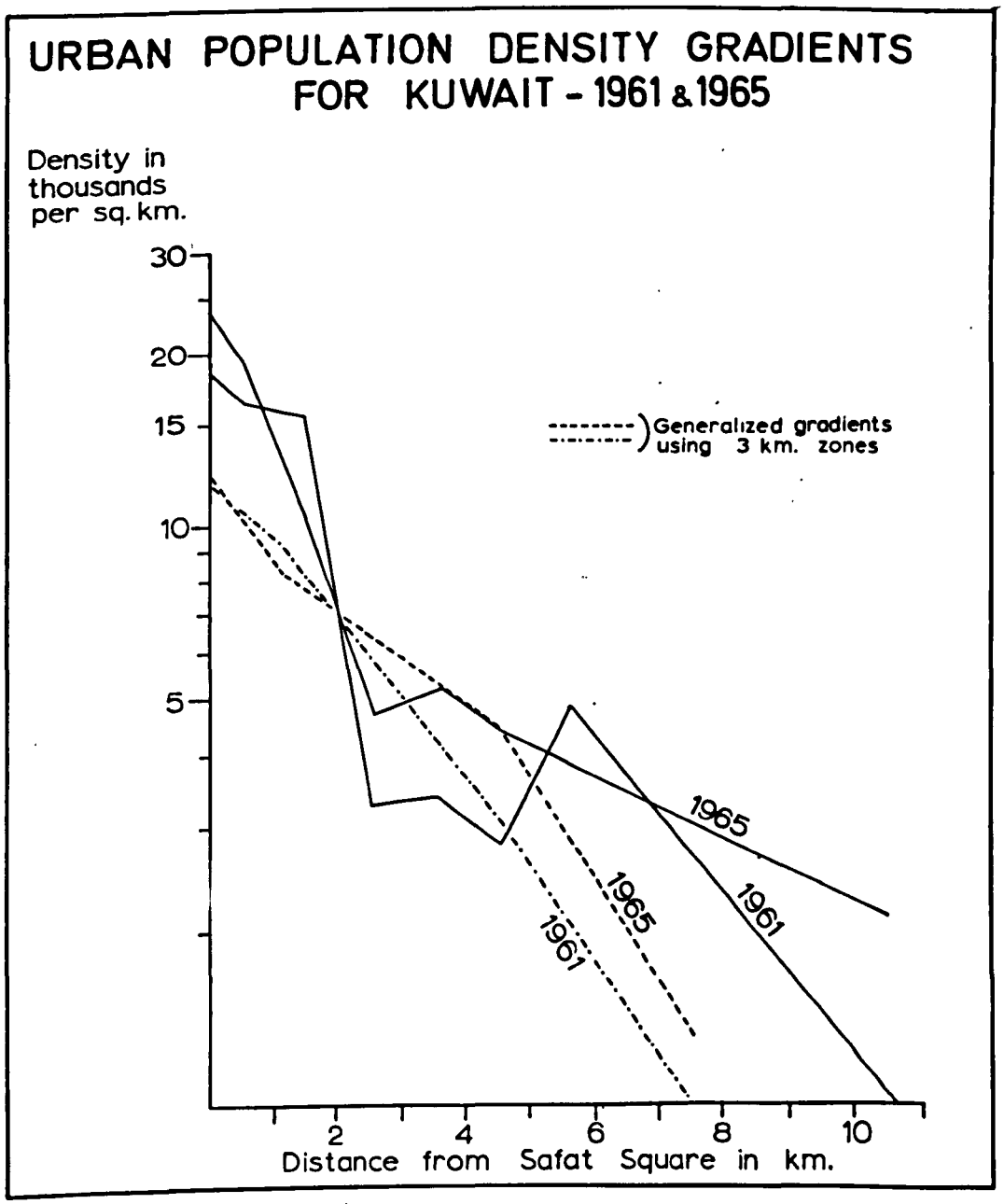

URBAN POPULATION DENSITY GRADIENTS
FOR KUWAIT - 1961 & 1965
Density in thousands per sq. km.
30
20
15
10
5
Generalized gradients using 3 km. zones
1965
1961
1965
1961
2
4
6
8
10
Distance from Safat Square in km.

Figure 8.7

ii) Alternatively, Berry's assumptions on the socio-economic aspirations of the rich in non-Western areas may be wrong (see quotation in IIIa above). The distribution of sections of the population are considered in detail in Chapter 9. One section of these studies suggests Kuwait's social structure is highly original but no clear-cut tendency of the rich to live either in the city centre or in the outlying suburbs can be discerned. Both high levels of general affluence coupled with high mobility (in 1965 there was almost one private car per household) will both blur the definition of what Berry implies by "non-Western" cities (see Sjoberg 1960 for further discussion of thes definitions).

d) Population Densities in other Centres

As Table 8.3 shows, urban population densities in the outlying centres vary a great deal - from Abruq Khaitan which was as densely settled in 1965 as the Old City, to Fantas and Manqaf which were more thinly peopled than any of Kuwait City's suburbs except Sulaibikhat (Table 8.2). Why do these differences arise?

Table 8.3 POPULATION DENSITIES OF OUTLYING TOWNS AND VILLAGES IN 1957, 1961, & 1965

Centre	POPULATION DENSITY PER SQ.KM. 1957	1961	1965
Abruq Khaitan	1,133	4,581	12,426
Farwaniya	1,483	3,403	9,293
Fahahil	2,028	3,329	4,723
Jalib As-Shuyukh/ Idhailiya	387	895	4,703
Jahra	716	1,396	3,048
Shuaiba	674	1,071	2,539
Madina Al-Amal	N.A.	562	1,194
Abu Halifa	253	527	802
Fantas	332	413	642
Manqaf	N.A.	278	635

Calculated from :i)Statistical Abstract, 1966, p.34.
ii) Censuses of Population, 1957; 1961; and 1965; Table 1.

First, some reservations must be expressed about the data itself; in the smallest centres, areal definitions are vague, but as far as possible the gross area of a centre has been assessed in the same way as for larger centres whose definitions are better known and are hence more reliable.

In general, larger centres are more densely peopled than smaller ones; in 1965 the correlation coefficient relating centre size to its overall density was almost perfect for the 10 centres shown in Table 8.3. Again, this relationship contradicts Berry's assertion that "compactness diminishes with size" which he derives from a study of selected Asian and United States cities.

Notably the centres just south of Kuwait City (Abruq Khaitan and Farwaniya) have the highest densities because of heavy immigration by non-Kuwaitis. Much of the residential accommodation is apartment blocks over two stories high, compared with the more extensive villa accommodation in the new suburban neighbourhoods (such as Dasma, Qadisiya, and Khaldiya) and in other outlying centres such as Jahra and Abu Halifa.

In the post-1965 period, both the Old City and the non-Kuwaiti districts of Hawalli, Salimiya, and the outlying centres of Abruq Khaitan, Farwaniya, and Fahahil will have increased their populations and their overall densities further by the infusion of new migrants. These areas are the only places where non-Kuwaitis can reside in Kuwait; thus, the increase described in Chapter 5 will have been concentrated in these districts.

CONCLUSION

Both the spatial distribution of population and the degree of concentration have been considered in the foregoing Chapter. In particular, temporal changes have been studied and placed in the

theoretical context of modern systems theory. In several ways Kuwait's population distribution and changing urban population density gradients have indicated failings in accepted general theories formally stated, for example, by Clark (1951) and Berry (1963). Conclusive suggestions for the modification of these theories to help in the explanation of Kuwait's population patterns have been avoided since at this stage little has been said on the internal structure and function of Kuwait's urban areas vis a vis other examples. Chapters 9, 10, and 11 rectify this deficiency, enabling some positive conclusions to be reached on Kuwait's structure and function, and the bearing this has on current concepts of the similarities and differences between "Western" and "non-Western" cities.

CHAPTER NINE

POPULATION COMPOSITION AND SOCIAL AREAS WITHIN KUWAIT

Introduction

Up to this juncture city structure has been referred to but not discussed at length. In Chapter 7 the physical expansion of Kuwait City was examined together with some aspects of the structure of the contemporary city; however, there is an entirely different aspect of city structure which includes the social, demographic, and economic characteristics of districts within the city. Most of the established theories in urban geography relate to the distribution and change in these and similar variables, themselves closely associated with the physical attributes of an area. While the links between the forms and functions of districts within cities are clearly recognised internationally (Murphy 1966; Norborg 1962; Mayer & Kohn 1963; Mabogunje 1968; et al), there is a degree of disagreement on the changing relationships between these districts.

First of all, the classical theories on urban structure will be reviewed. Following this, some distinctions will be drawn between "Western" and "non-Western" cities, so that Kuwait's urban structure - the central theme in this Chapter can be fully explained from both theoretical and empirical standpoints.

I.

a) Theoretical Explanations of City Structure

Broadly, three major theoretical contributions have been made to the analysis of city growth and structure. Historically, Burgess (1925) was the first to specify the theoretical form of cities in general. His statement, called the "concentric zone theory", proposes 5 major concentric zones centred on the central business district which extended outwards in space into neighbouring zones during the city's normal growth process. His zones were named :

(i) Central business district

(ii) Zone in transition

(iii) Zone of independent working men's homes

(iv) Zone of better residences

(v) Commuters' zone

(Burgess; in : Smith & White 1929, pp.113-138).

Burgess's model has undergone severe criticism from workers in a variety of disciplines, but most cogent is Hoyt's (1964) critique together with an alternative theory, based on empirical evidence derived from a study of 64 American cities (Hoyt 1939). Hoyt's theory included a refutation of the concentric ring theory, in its place suggesting that similar types of development (residential, retail, or industrial) took place in sectors which over time extended progressively outwards (Hoyt 1950, reprinted in Hoyt 1966, pp.584-598). Other studies,

notably by Firey (1947) working in Boston, and Rodwin (1950) have suggested failings in the theory as a whole, and Hoyt himself in 1964 admitted that his theory oversimplified contemporary developments in city structure.

Harris & Ullman's (1945) multi-nucleation theory was an attempt to explain the growing complexity of city structures and the factors underlying changes over time. Separate nuclei- residential, industrial, or business centres - can spark off urban development around them, the character of which is determined by the location and function of the original nucleus (Harris & Ullman 1945, p.15; reprinted in Mayer & Kohn 1963, pp.283-286.).

Although the three models outlined above by no means exhaust the list of theories regarding urban development current today (see Colby 1933; and the bibliography in Mayer & Kohn 1963), they summarize the basic reasoning behind changes which affect all cities over a period of years. Unfortunately, most of the evidence from which they are derived stems from studies of North American cities, although interestingly, Hoyt (1966, pp.293-295) pointed out 5 factors which differentiated urban development in North America from the rest of the world. They are :

(i) the high ratio of automobiles to people in the U.S.A.

(ii) private ownership of property

(iii) the development of outlying shopping centres in America

(iv) the stability of the dollar and the resulting building boom

(v) the U.S. development laws

(b) "Western" and "non-Western" Cities

Frequently in this work allusions have been made to the differences between cities in the countries of North America and Western Europe and those elsewhere in the world. Several terms have been used to differentiate the two groups - Berry (1963) uses "Western" and "non-Western" while Sjoberg (1960), the pioneer of such comparisons, uses "industrial" and "pre-industrial" to denote the same two classes of cities. Despite a certain vagueness in this terminology (see Sjoberg 1960, pp.1-24), a large volume of city studies are now available for areas outside the "Western", "industrial" zone of North America, Western Europe, and parts of Oceania (e.g. Ginsburg's list of 99 Articles in : Hauser & Schnore 1965, pp.335-346). These and other studies(Mabogunje 1968; and McGee 1967) en bloc provide a weighty volume of evidence pointing to differences in the evolution and structure of Western and non-Western cities. Already in this thesis the inapplicability of established theories on urban form and function have been indicated, but the differences between Western and non-Western cities have not been considered at length. Before moving forward to a detailed consideration of Kuwait's urban ecology, we must consider some of the characteristics of the non-Western city which have been noted in the literature to date.

Sjoberg (1960; and in : Hauser & Schnore 1965, pp. 213-263) provides the most specific analysis available. He lists five basic differences between non-Western cities and their counterparts in Europe or North America.

(i) Clustered in the central area are the "most prominent governmental and religious edifices and usually the main market" (1960, p.96). Notably, the market or commercial function is subsidiary to the politico-religious structures.

(ii) With a clear-cut class system, evidently the elite cling to the city centre while the poor reside at the city's periphery (pp.98-9).

(iii) Further ethnic and occupational divisions in society lead to a significant degree of segregation and craft localization (pp.100-101).

(iv) Land uses are not clearly distinguished since one building or plot of land can be used for several purposes (e.g. mosques serve both as schools and local market centres) (pp.102-3).

(v) Finally, communication within the city and with other centres is slow and laborious - a marked contrast to the situation in industrialized cities (pp.103-5).

Using these criteria to define the archetype "non-Western" city, we can begin to define how Kuwait differs from this traditional ideal.

II. LAND USE AND URBAN ECOLOGY

Sjoberg's approach to cross-cultural urban analysis is basically sociological although he refers in several instances to the association of the form and function in the urban milieu (e.g. the demarcation of the centre by the markets, the square, and religious and political edifices). In Chapter 7 the concentration of these physical elements (in Kuwait, the suq, Safat Square, Masjid as-Suq, and the old Baladiya al-Kuwait - Kuwait's administrative nexus) in the centre of the Old City have already been noted. Much more important is the socio-ecological structure of the city's resident population amidst these urban landmarks.

a) Methods

In Kuwait, statistics on what in the U.S.A. are called "Census tracts" are not as comprehensive as one would wish, but nevertheless the wide-ranging Census of Population of 1965 does provide a body of socio-demographic information which can usefully be employed in the analysis of the character of small districts within the city. While the population of individual Census divisions ranges from 4,650 in Shaab to 64,542 in Hawalli, the assistance of the Census Section of the Central Statistical Office made possible a further division of some of these units into smaller divisions not recognized in the Census publications.

Two analytical approaches are possible with this data. First, individual variables can be extracted and mapped using

divisions such as quartile deviations. Alternatively, these variables can be grouped together and their joint distributions mapped and analysed. While the first method is simpler, it involves a strong subjective bias since the choice of the individual variables to be mapped will strongly influence the results of the analysis. While the second method is much more complex, its application has been greatly facilitated by the advent of the modern digital computer.

Both approaches are adopted here, the first to answer specific questions such as the place of residence of the rich and the poor, the citizens and the aliens; and the second to provide a wider based statistical background to substantiate much broader questions on Kuwait's structure and urban ecology.

b) Selection of variables

For the second method, using combinations of several variables, selection of the original variables was of minor importance; broadly, as many variables as possible, relating to Kuwait's ecological structure, were extracted from the Census and allied publications and reduced to percentage figures. For statistical purposes no two variables could be the reciprocals of one another (e.g., it would be impossible to use both percentage of Kuwaitis and percentage of non-Kuwaitis in the analysis).

Five individual variables were selected for mapping and analysis. The distribution of Kuwaitis and non-Kuwaitis was first chosen since this distinction underlies so many of the special

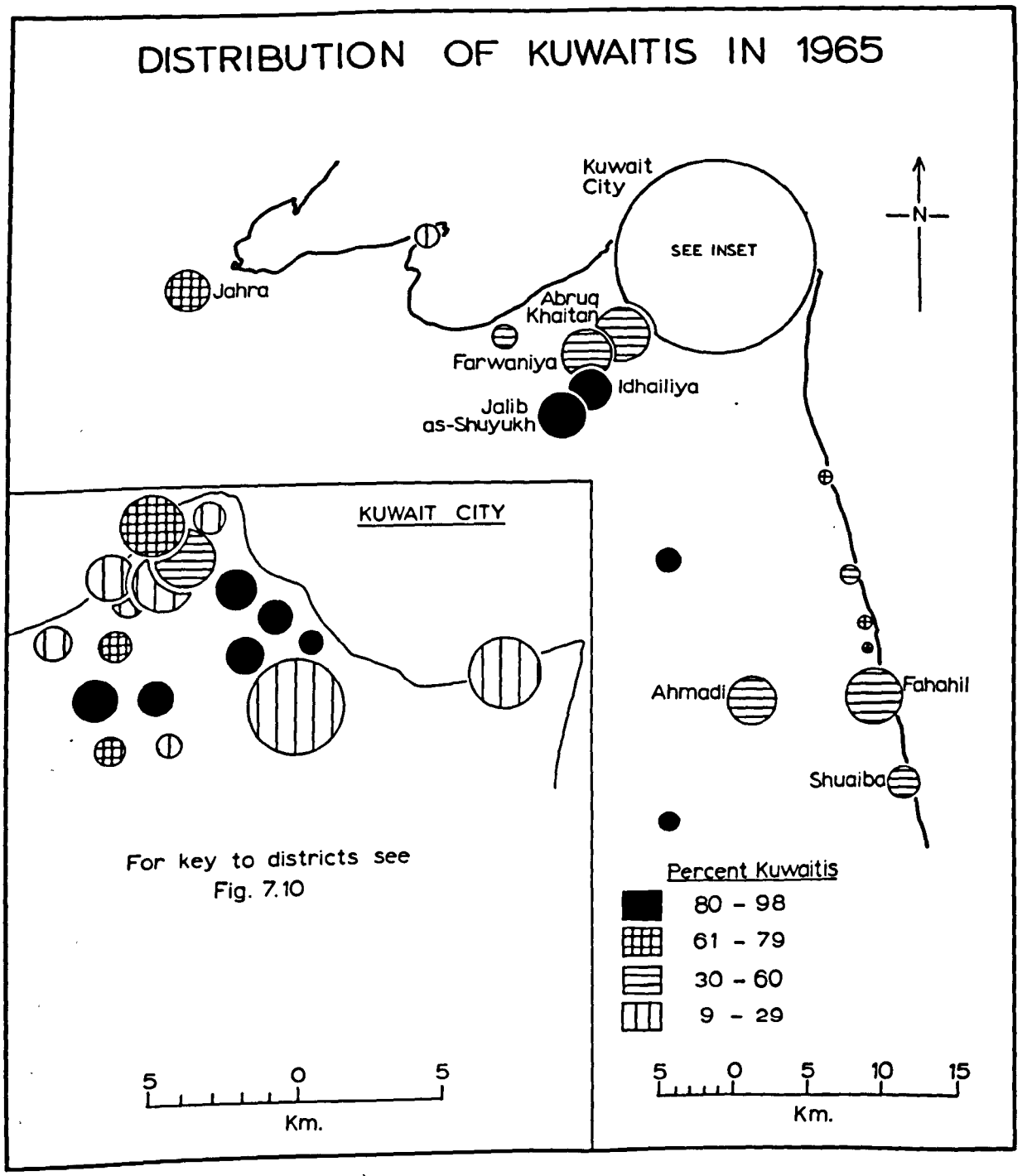

DISTRIBUTION OF KUWAITIS IN 1965
Kuwait City
SEE INSET
N
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
Shuaiba
For key to districts see Fig. 7.10
Percent Kuwaitis
80 - 98
61 - 79
30 - 60
9 - 29
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.1

characteristics of Kuwait. Then, to describe the location of the "poor" in Kuwait, two variables were chosen - percentage of illiterates and percentage employed in construction (manual labour) by districts. Since level of education largely determines one's job, salary, and hence social status in Kuwait, illiteracy was chosen as a good indication of the location of the lowest classes of society.

For the "rich", two measures of status were employed - percentage of workers in professional and technical tasks, and percentage employed in administration.

III. THE DISTRIBUTION OF INDIVIDUAL VARIABLES

(a) Kuwaitis and non-Kuwaitis

Kuwaitis are strongly concentrated in the new neighbourhoods and in the outlying villages of Jalib as-Shuyukh, Idhailiya, Maqwa, and Wara, which have little or no attraction for foreign immigrants, as Fig. 9.1 shows. In contrast, over 60 percent of the population of the Old City, of Shuwaikh, Sulaibikhat, Hawalli, and Salimiya in the suburbs, and of Dawha, Ahmadi, and Fahahil beyond is comprised of non-Kuwaitis. The latter two centres have received an influx of foreigners because of their association with the oil industry, but Dawha is a special case. In 1961, with Iraq's invasion threat imminent, all Iraqi citizens were gathered up and enclosed within the shanty town of Dawha. Even today Dawha remains the largest concentration of Iraqis in Kuwait outside the Old City.

Within Greater Kuwait, non-Kuwaitis, denied access to the new neighbourhoods (see Chapter 7), are left to choose from Hawalli, Salimiya, Farwaniya, Abruq Khaitan, Shuwaikh, and Sulaibikhat as places to live. In each of these districts they comprise three-fifths of the total population.

b) Illiterates

Illiteracy is strongly associated with nationality, hence the distribution of illiterates reflects the distribution of various nationalities. Iranis and Iraqis, for example, have high illiteracy rates compared with Europeans and Americans.

As Fig. 9.2 shows, those places with over 50 percent of their male population illiterate are the outlying villages away from the main urban centres. Distance from Safat Square and illiteracy have a correlation co-efficient of 0.4 - significant at the 5 percent level (females were excluded from the calculation because of known errors in recording). Salimiya, the Kuwaiti neighbourhoods, and Ahmadi have the lowest illiteracy rates. Surprisingly, levels of illiteracy in the Old City are lower than the State average of 29.6 percent.

c) Employees in Construction

The distribution of construction workers (Fig. 9.3) reflects two trends, the first of which is the tendency of Kuwaitis not to take on manual labouring tasks. Secondly, it recognizes that non-Kuwaitis constitute two major groups - those qualified to undertake "white-collar" tasks and those

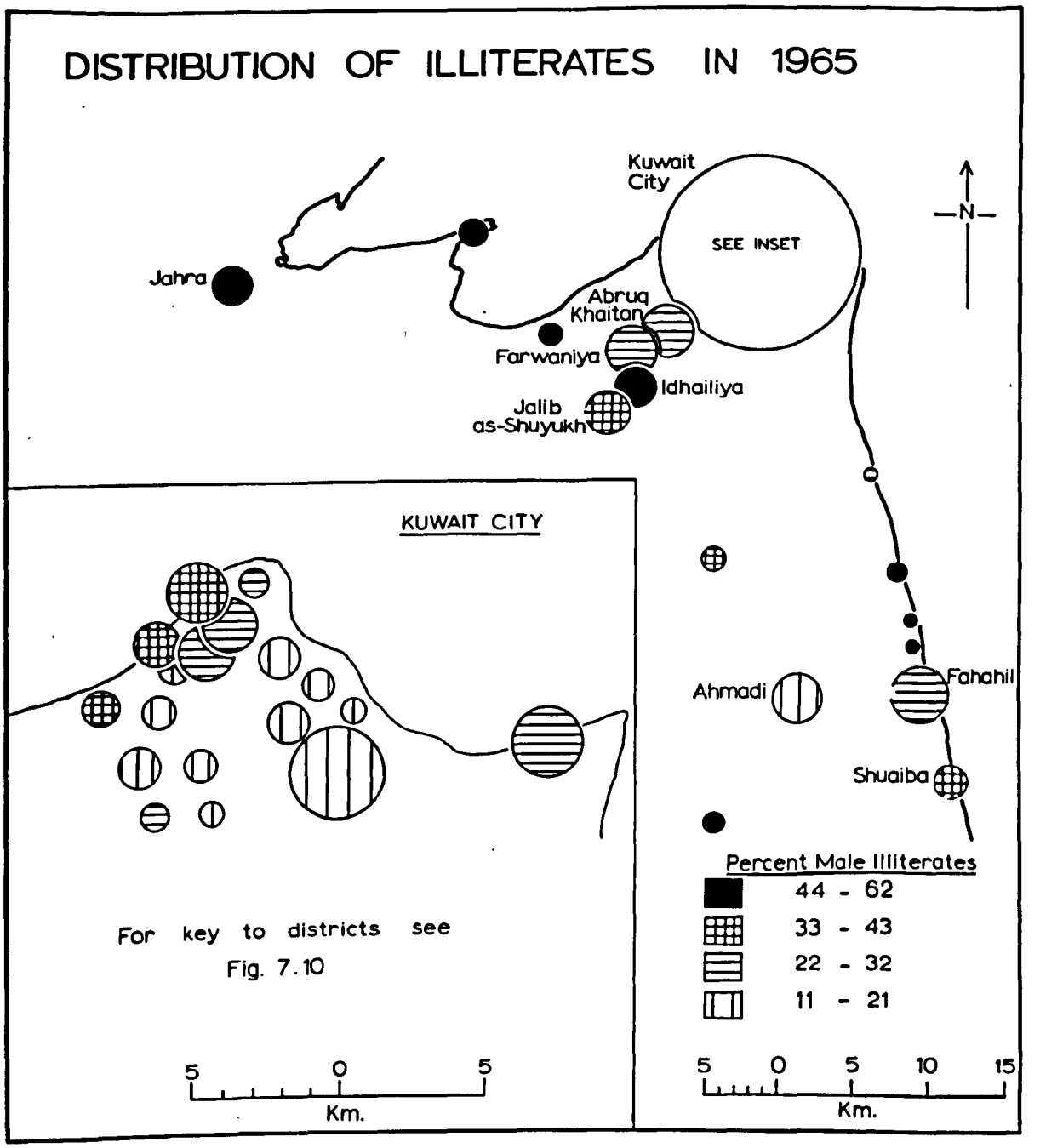

DISTRIBUTION OF ILLITERATES IN 1965
Kuwait City
SEE INSET
N
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
Shuaiba
Percent Male Illiterates
44 - 62
33 - 43
22 - 32
11 - 21
For key to districts see Fig. 7.10
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.2

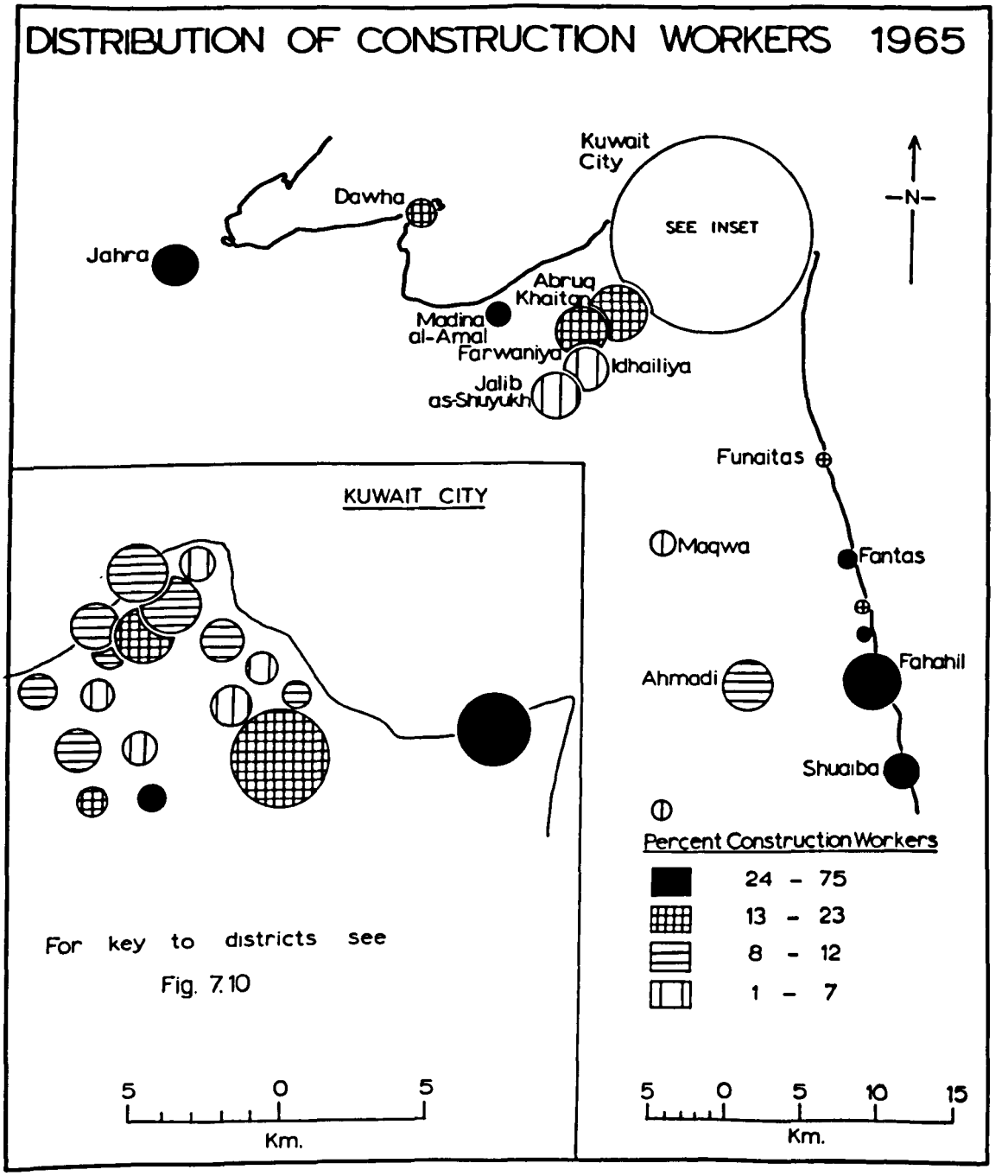

DISTRIBUTION OF CONSTRUCTION WORKERS 1965
Kuwait City
Dawha
Jahra
SEE INSET
N
Abrug Khaitan
Madina al-Amal
Farwaniya
Idhailiya
Jalib as-Shuyukh
Funaitas
KUWAIT CITY
Maqwa
Fantas
Fahahil
Ahmadi
Shuaiba
Percent Construction Workers
24 - 75
13 - 23
8 - 12
1 - 7
For key to districts see Fig. 7.10
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.3

whose level of education restricts them to labouring.

For the first reason very few construction workers live in the Kuwaiti neighbourhoods, except those in which construction activity continues - e.g. Idailya and Khaldiya. There the labourers live on site in makeshift huts and shacks. Outlying centres, especially those with high proportions of illiterates (Madina al-Amal, Dawha, the desert, and Fantas) concentrate the labour force employed in construction.

From the distribution of illiterates and those employed in construction it seems that the "poor" are largely located in outlying towns and villages, although average proportions of both populations are also located in the Old City.

d) Professional and Technical Workers

Since non-Kuwaitis fill most of the highly skilled positions in Kuwait, the majority of these high-grade employees live in the Old City (Specifically Dasman and Salihiya, Fig. 9.4), in Hawalli, Salimiya, and Ahmadi. Less than 6 percent of the population of the Kuwait neighbourhoods can be ranked in these classes. Figures are again lowest for the outlying centres.

e) Administrative workers

Here Kuwaitis are strongly represented, so that Fig. 9.5 shows above average proportions of administrators in the new neighbourhoods. Clearly, the preference shown for Kuwaiti citizens in the Civil Service at the Administrative level cuts across other qualifications, including educational status. This

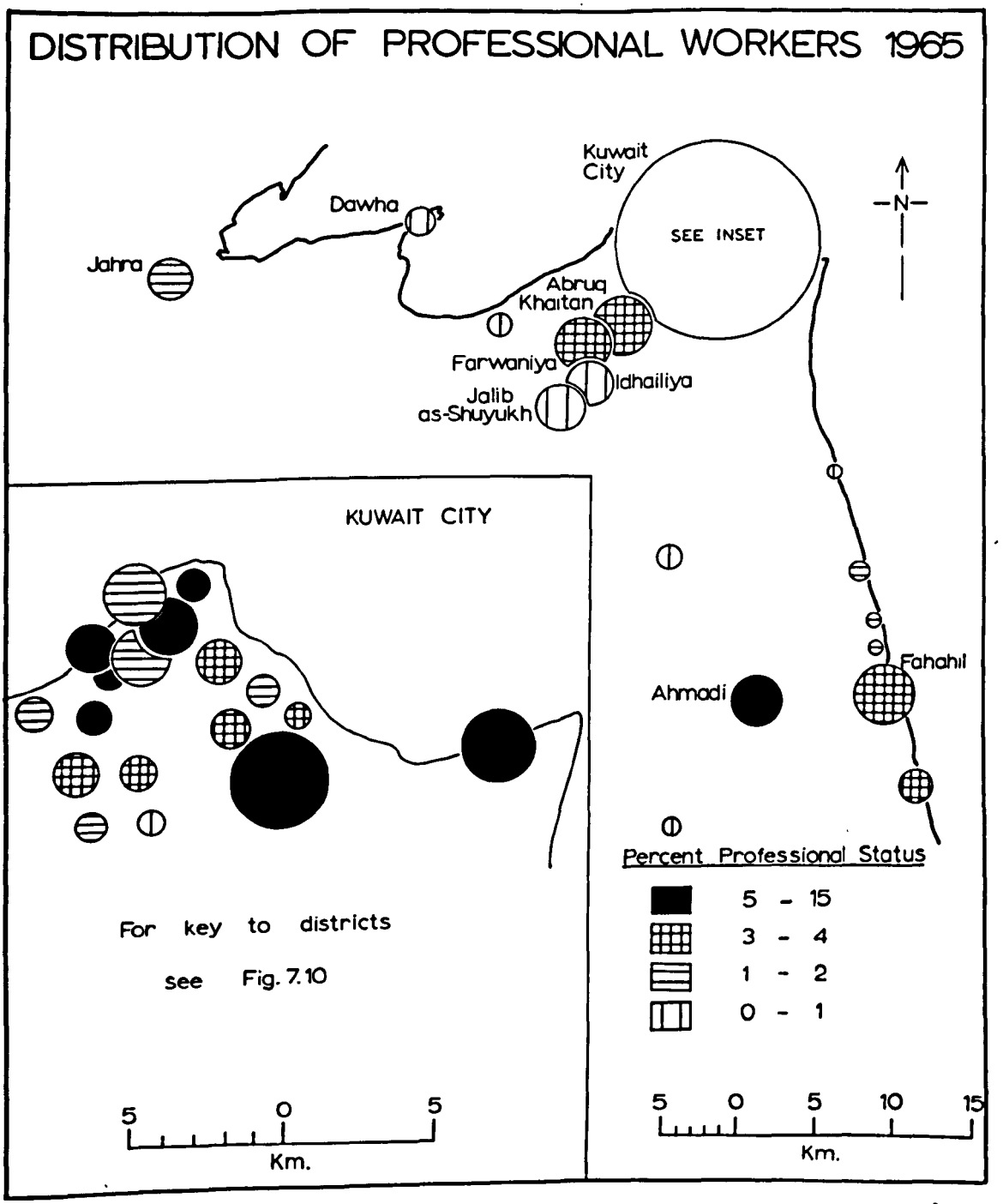


Figure 9.4 (Included in this category are Technical Workers)

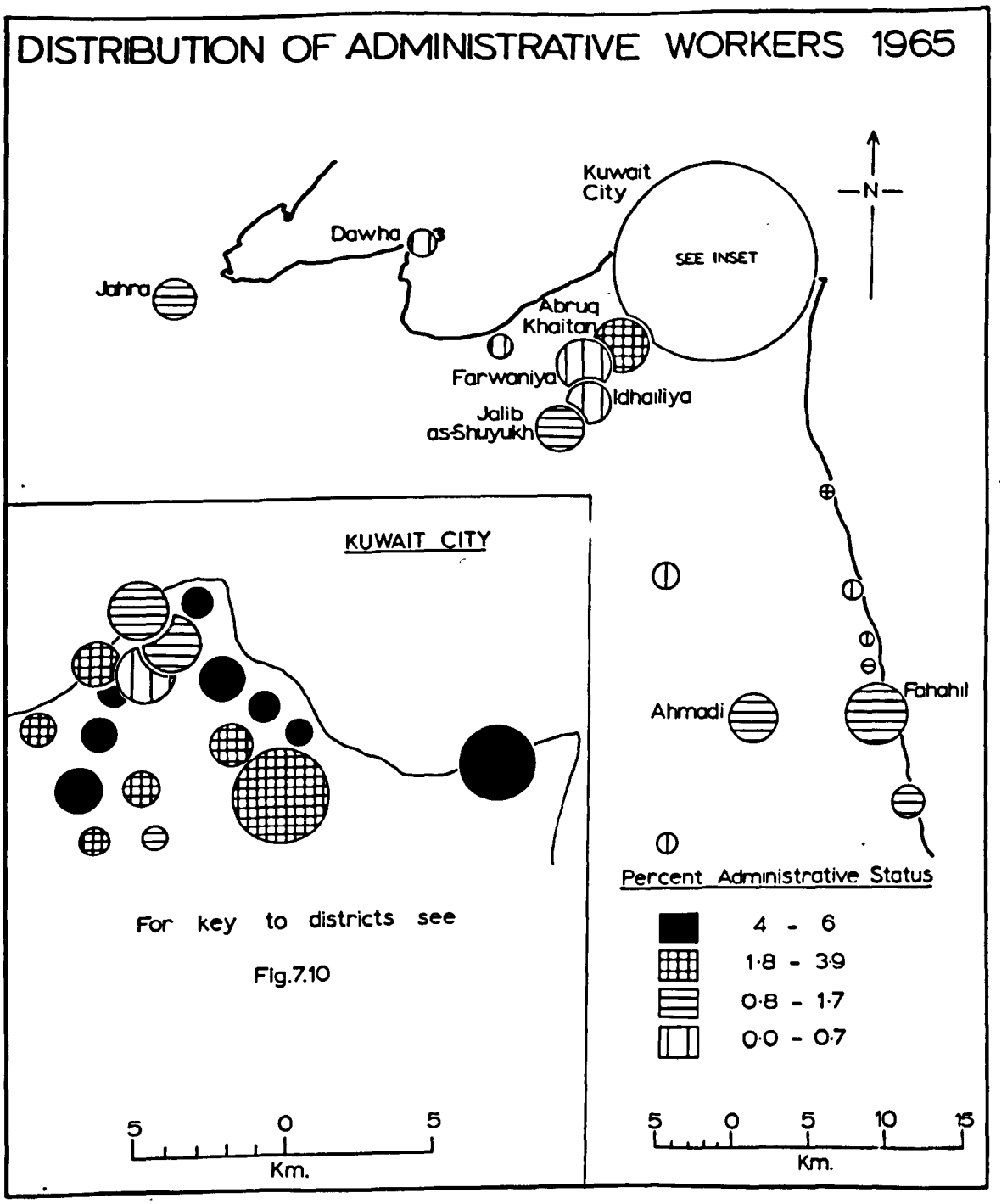

DISTRIBUTION OF ADMINISTRATIVE WORKERS 1965
Kuwait City
N
Dawha
SEE INSET
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
Percent Administrative Status
4 - 6
1·8 - 3·9
0·8 - 1·7
0·0 - 0·7
For key to districts see
Fig.7.10
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.5

open payroll for Kuwaitis in Government offices places them higher in status than their education and other attributes would suggest (39.4 percent of the male Kuwaitis over 10 were illiterate in 1965 - Census of Population, 1965, Table 4a). Discrimination in both housing and employment against non-Kuwaitis upsets the distribution of variables measuring both these factors. Regarding the overall structure of Kuwait City, it seems that the "rich" (the high-grade Kuwaiti employees) are being forced into the suburbs, leaving the city centre and a certain range of suburban areas open to invasion by non-Kuwaitis, themselves constituting a far from homogenous group (see Chapters 5, 6, and 7 above).

Problems arise in the separating out of individual elements for study and analysis since many are statistically associated (e.g. construction workers and male illiterates; nationality and male illiterates). Some way of sorting out groups of related variables is obviously required if we are to arrive at a more sensible account of the distribution and composition of the districts and centres comprising contemporary Kuwait.

IV. THE ANALYSIS OF GROUPS OF VARIABLES

a) Method

Psychologists were the first group of workers to face the difficulties associated with co-variance and the problem of separating meaningful character traits from a mass of information relating to psychological attributes (Fruchter 1954). Since then, workers in other disciplines have been confronted with the same

problems (e.g. Moser & Scott 1961; Russett et al 1967; Klovan 1966; Hartley 1968; Jones 1968; and many others). The problem is so common that a standard solution, known as "Factor Analysis", has been evolved.

Factor Analysis is a complex statistical routine involving many steps in its calculations - so many that with a large data matrix, the routine is almost out of question unless one has the use of a computer. For the Kuwait data, a matrix of 39 observations by 38 variables was composed and prepared for the computer. A Q-mode Factor Analysis programme written by Klovan (1966) was employed involving several statistical stages. Since the details of the computation are of little interest here, readers are referred to publications by Klovan (1966) and Imbrie (1963) for a full description.

b) Variables

Table 9.1 presents a full listing of the 38 variables employed in the Factor Analysis of each of Kuwait's 39 Census areas. Variables which are reciprocals of one another (e.g. Kuwaitis and non-Kuwaitis; people over 15 and people under 15) must be avoided since they will be perfectly correlated.

Table 9.1 VARIABLES EMPLOYED IN THE ANALYSIS OF SOCIAL AREAS IN KUWAIT

All statistics are for 1965

Code Number	Composition
	A. GENERAL CHARACTERISTICS
1	Kuwaitis as a percentage of the total population
2	Muslims ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
3	Christians ,, ,, ,, ,, ,, ,, ,, ,, ,,
4	Males ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
5	Single people ,, ,, ,, ,, ,, ,, ,, ,, over age 15
6	Married ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
7	Illiterates ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, 10
8	People educated above Secondary level ,, ,, ,, ,, ,,
	B. ECONOMIC STATUS (MALES ONLY)
9	Professional & Technical Employees as a percentage of those over age 12
10	Administrative ,, ,, ,, ,, ,, ,, ,, ,,
11	Clerical ,, ,, ,, ,, ,, ,, ,, ,,
12	Sales ,, ,, ,, ,, ,, ,, ,, ,,
13	Craftsmen ,, ,, ,, ,, ,, ,, ,, ,,
	C. ECONOMIC ACTIVITY (MALES ONLY)
14	Workers in Agriculture & Fishing as a percentage of all employed
15	,, ,, Mining & Quarrying ,, ,, ,, ,, ,, ,, ,,
16	,, ,, Manufacturing ,, ,, ,, ,, ,, ,, ,,
17	,, ,, Construction ,, ,, ,, ,, ,, ,, ,,
18	,, ,, Electricity, Gas & Water ,, ,, ,, ,, ,,
19	,, ,, Commerce ,, ,, ,, ,, ,, ,, ,,
20	,, ,, Transport ,, ,, ,, ,, ,, ,, ,,
21	,, ,, Services ,, ,, ,, ,, ,, ,, ,,

Table 9.1 (Contd.

Code Number	Composition
	D. AGE STRUCTURE
22	Percent of total population aged 0 - 14
23	,, ,, ,, ,, ,, ,, ,, 15 - 39
24	,, ,, ,, ,, ,, ,, ,, 40 - 64
25	,, ,, ,, ,, ,, ,, ,, 65 and over
26	Women employed as a percentage of all women aged 15 - 64
	E. NATIONALITY
27	Jordanians as a percentage of the total population
28	Iraqis ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
29	Lebanese ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
30	Syrians ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
31	Egyptians ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
32	Omanis ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
33	Iranis ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
34	Indians ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
35	Pakistanis ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
36	British ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,
	F. CENTRE CHARACTERISTICS
37	Density per sq. km.
38	Size of Centre in thousands

All variables were transformed into percentage distributions to obtain normal or near-normal distributions in every instance. All 39 Census areas in Kuwait have been employed in the analysis to give a full cover of the extent of the socio-economic gradients throughout the State.

V. THE FACTORS : THEIR COMPOSITION AND DISTRIBUTION

Broadly, the programme "collapses" the original 39 x 38 data matrix into a series of "Factors". These Factors are a synthesis of the variance of the original variables produced from a cos-theta matrix, itself the basis for the calculation of eigenvalues and eigenvectors used to construct the principal component factor matrix (Klovan 1966, pp.39-40).

Once these synthetic "Factors" have been evolved, each of the 38 original variables is regressed in turn on the Factors so that the composition of each of the latter can be ascertained. Secondly, each area is attributed weightings on each of the Factors (using a "Varimax Factor Matrix") so that the areal distribution of the Factors can be plotted on maps. Finally, the varimax matrix is converted to Factor Components for the last 3 Factors to facilitate the plotting and identification of similar areas on 3-component diagrams.

Each of these 3 analytical steps will be treated separately in the case of Kuwait.

a) Factor Composition

Using the 38 variables specified for all 39 Census areas in

Kuwait, Table 9.2 shows that this large data matrix can be satisfactorily condensed into 7 Factors which together "explain" over 99 percent of the variation in this matrix. However, the first 3 Factors "explain" 92.0 percent of the variance while the subsequent 4 Factors only account for an extra 7.1 percent of the total explanation. We are justified in considering only these first three Factors since they account for the vast majority of the variance of the original data matrix. Each of the three Factors expresses one unique dimension of the original matrix and hence is comprised of a different group of elements from all others.

Table 9.2 "VARIMAX FACTOR MATRIX FOR SEVEN FACTORS"

		COMM.	1	2	3	4	5	6	7
1	DASMAN	0.9963	0.5778	0.5339	0.4849	0.3552	0.1027	-0.0120	0.0734
2	SHARQ 1	0.9991	0.2962	0.9338	0.1946	-0.0094	0.0043	0.0182	-0.0313
3	SHARQ 2	0.9983	0.4109	0.8536	0.3024	0.0826	0.0418	-0.0065	0.0263
4	MIRQAB	0.9964	0.2847	0.8969	0.3096	0.1221	0.0085	0.0121	-0.0054
5	SALIHIYA	0.9728	0.3633	0.6310	0.4594	0.4566	0.1465	-0.0228	0.0328
6	QIBLA	0.9820	0.4147	0.7275	0.4371	0.2694	0.1135	0.0503	0.0414
7	SHUWAIKH	0.9664	0.3814	0.4933	0.6597	0.3749	0.0239	0.0324	0.0179
8	SULAIBIKHAT	0.9733	0.4922	0.3591	0.5691	0.5245	0.0400	0.0098	0.0379
9	SHAMIYA	0.9972	0.7844	0.4217	0.3489	0.2599	0.0510	-0.0904	0.0633
10	KAIFAN	0.9974	0.7182	0.5577	0.3608	0.1560	0.0473	-0.0965	0.0672
11	FAIHA	0.9986	0.7680	0.5135	0.3241	0.1654	0.0556	-0.0779	0.0603
12	QADISIYA	0.9987	0.7636	0.5302	0.3136	0.1488	0.0571	-0.0876	0.0547
13	DASMA	0.9972	0.7001	0.6078	0.3290	0.1187	0.0678	-0.0838	0.0601
14	DI'YA	0.9975	0.7997	0.3885	0.3869	0.1990	0.0761	-0.0744	0.0805
15	SHAAB	0.9980	0.7884	0.3561	0.4347	0.1934	0.0784	-0.1003	0.0848
16	MAD AL AMAL	0.9955	0.4884	0.3171	0.8074	0.0270	0.0196	-0.0543	0.0205
17	JAHRA	0.9972	0.6851	0.4033	0.5910	0.0813	0.0697	0.0285	0.0603
18	DAWHA	0.9663	0.4844	0.4440	0.6702	0.1967	0.0682	0.1895	0.0780
19	DESERT	0.9854	0.6799	0.2509	0.6408	0.0965	0.1566	0.1233	0.0233
20	KHALDIYA	0.9981	0.7169	0.3991	0.5098	0.2017	0.0481	-0.1373	0.0561
21	IDAILIYA	0.9925	0.3502	0.3250	0.8619	0.1215	-0.0020	-0.0815	0.0007
22	HAWALLI	0.9912	0.3889	0.7188	0.4015	0.1962	0.1277	-0.0014	0.3274
23	SALIMIYA	0.9924	0.5407	0.4474	0.5851	0.2633	0.1365	-0.0083	0.2635
24	JABRIYA	0.9796	0.5670	0.3640	0.6706	0.2170	0.1035	0.0368	0.1295
25	ABRUQKHAITAN	0.9829	0.6170	0.3332	0.5994	0.2759	0.1319	0.0471	0.1901
26	FARWANIYA	0.9948	0.5251	0.6971	0.4331	0.0971	0.1056	0.0807	0.1353
27	J SHUYUKH	0.9955	0.7789	0.4633	0.4002	0.0600	0.0544	0.0714	0.0481
28	ICHAILIYA	0.9956	0.7956	0.4539	0.3754	0.0773	0.0480	0.0751	0.0430
29	SHADADIA	0.9918	0.8499	0.2439	0.4194	0.1511	0.0491	0.0847	0.0423
30	FAILAKA	0.9837	0.7790	0.2760	0.4951	0.1734	0.1148	0.0094	0.1103
31	AHMADI	0.9948	0.4251	0.5432	0.4805	0.1532	0.5115	0.0043	0.0541
32	FAHAHIL	0.9972	0.4428	0.5589	0.6503	0.1408	0.1673	0.0024	0.1343
33	SHUAIBA	0.9923	0.4844	0.4191	0.7353	0.0993	0.1632	-0.0409	0.0560
34	MANQAF	0.9916	0.5834	0.2903	0.7445	0.0626	0.0856	0.0024	0.0368
35	ABU HALIFA	0.9929	0.7444	0.2941	0.5541	0.1935	0.0669	0.0322	0.0483
36	FANTAS	0.9965	0.5324	0.3178	0.7667	0.1433	0.0414	-0.0284	0.0324
37	FUNAITIS	0.9964	0.7565	0.2809	0.5504	0.1824	0.0558	0.0674	0.0371
38	MAGWA	0.9962	0.8078	0.3671	0.4305	0.0648	0.1088	0.0836	0.0195
39	WARA	0.9942	0.7969	0.3572	0.4496	0.0321	0.1332	0.1017	-0.0166
	VARIANCE		38.716	25.277	28.061	4.216	1.464	0.494	0.910
	CUM. VAR		38.716	63.993	92.054	96.270	97.734	98.227	99.137

FACTOR 1

This first Factor, as Table 9.2 shows, "explains" 38.7 percent of the total variance. Table 9.3 presents the Varimax Factor Score Matrix from which we can begin to isolate the principal variables involved in all 3 major Factors. Factor I is comprised of a variety of elements, but the variables with high positive or high negative scores are listed in Table 9.4. Clearly, most of the attributes outlined are those of the Kuwaiti citizen population, and indeed this variable scores most highly on Factor 1. As Chapter 6 showed, Kuwaitis are a very young population with a high proportion of married people; they work largely in service industries, and are almost all Muslims. Conversely, they are neither craftsmen nor construction workers - both attributes of non-Kuwaitis generally and Iranis in particular.

Table 9.3 "VARIMAX FACTOR SCORE MATRIX FOR SEVEN FACTORS"

For key to Variables, see Table 9.1

FACTOR	1	2	3	4	5	6	7
VARIABLE							
1	4.0880	-0.4824	-0.1505	-1.6530	-0.0239	-1.9878	-0.8669
2	2.1753	0.9804	2.0502	0.6885	0.0358	-0.2860	1.1075
3	-0.3557	0.2057	-0.0417	0.9930	1.4303	-0.1820	-0.4571
4	0.2914	1.0733	1.9359	1.7505	0.2428	-0.1010	-0.9163
5	0.1731	0.5897	0.9885	1.3852	-0.4528	-1.9038	-0.8631
6	1.1264	0.7714	1.0223	0.6888	2.1918	1.6168	1.1410
7	1.5914	0.0516	2.0785	-1.7009	-0.4218	3.6981	-1.0903
8	-0.1166	0.0624	-0.0580	0.6954	0.3580	-0.1607	-0.2073
9	-0.1100	0.0802	-0.0818	0.7041	0.6016	-0.3500	0.3591
10	0.0569	0.0291	-0.0745	0.2600	0.0553	-0.4573	0.1395
11	0.2287	0.2451	-0.3378	0.5867	0.7911	-1.8057	0.4932
12	0.3083	0.2925	-0.2438	0.2477	-0.1774	-0.1953	0.2063
13	-1.1299	0.7222	2.6974	-0.4521	-0.0417	-0.6716	0.4364
14	0.1291	-0.1306	0.2261	-0.1981	0.1232	0.5567	-0.3272
15	-0.1371	-0.0546	0.0380	-0.4904	4.6138	-0.2500	-1.6059
16	-0.2324	0.2716	0.3777	0.6695	-0.7473	0.3570	0.4778
17	-0.8943	-0.0077	2.8240	-1.7488	-0.6969	-2.2734	0.5813
18	0.0016	0.0611	0.0600	0.2310	-0.1248	0.6671	0.3980
19	0.1867	0.5281	-0.3364	0.8122	-0.0665	-0.1019	0.1378
20	0.0567	0.1711	-0.0447	0.1813	0.0426	0.3685	0.2343
21	2.6028	0.3675	-1.1366	2.3558	-1.3862	0.1242	0.6283
22	1.4504	0.1616	0.1533	-0.5612	1.5609	-0.7515	1.9132
23	0.0108	0.9285	1.5960	1.9106	-0.2921	0.2074	-0.9113
24	0.2882	0.0760	0.2071	0.3891	0.4308	0.0629	-0.2362
25	0.0952	-0.0020	0.0109	0.0444	0.0282	-0.0236	-0.0755
26	-0.2149	0.2405	-0.0420	2.3247	0.0637	0.0525	-0.9739
27	-0.6540	0.5270	0.1761	0.8845	0.7638	0.6002	2.1077
28	-0.1705	0.0633	0.4925	0.0393	-0.1845	1.4619	0.2351
29	-0.1858	0.1211	0.0894	0.1832	-0.0099	0.1156	0.9047
30	-0.1509	0.1084	0.2018	0.1686	-0.2197	0.3522	0.2676
31	-0.0791	0.0640	-0.0326	0.5955	-0.1240	0.0296	-0.0578
32	-0.1562	0.1784	0.1016	0.3969	0.4377	-0.1317	-0.4015
33	-0.5188	0.2035	1.1225	0.0459	-0.7611	-0.8127	-0.6917
34	-0.1140	0.1532	-0.0445	0.2006	0.7260	-0.1293	-0.3770
35	-0.1061	0.1307	0.0135	0.0322	0.6126	0.0260	-0.0318
36	-0.0206	0.0080	0.0070	0.0430	0.0590	0.0012	0.0162
37	-0.1760	5.5966	-1.5859	-1.6042	-0.3322	-0.0679	-0.9481
38	-0.2584	0.8613	-0.1772	-0.4872	0.2283	0.0558	3.7683

Table 9.4 THE COMPOSITION OF FACTOR ONE

HIGH POSITIVE LOADING			HIGH NEGATIVE LOADING		
1.	Kuwaitis	4.09	13.	Craftsmen	1.13
21.	Service employment	2.60	17.	Construction workers	0.89
2.	Muslims	2.17	27.	Jordanians	0.65
7.	Illiterates	1.59	33.	Iranis	0.52
22.	Age 0 - 14	1.45	38.	Size of Centre	0.25
6.	Married	1.12			

Factor 1 fairly summarizes the attributes of the Kuwaiti population as described in previous Chapters; for this reason we can name this dimension the "Kuwaiti citizen" Factor.

FACTOR 2

As Table 9.5 outlines, the populations described by Factor 2 live at a high density, are Muslims, have a male bias, and are concentrated in the young active age groups (15-39). They tend to work in commerce or be craftsmen, but they are not agricultural or construction workers, neither are they Kuwaitis.

Table 9.5 THE COMPOSITION OF FACTOR TWO

HIGH POSITIVE LOADING			HIGH NEGATIVE LOADING		
37.	Density	5.60	1.	Kuwaitis	0.48
4.	Males	1.07	14.	Agriculture & Fishing	0.13
2.	Muslims	0.98			
23.	Age 15-39	0.93			
38.	Size of centre	0.86			
6.	Married	0.77			
13.	Craftsmen	0.72			

We can conclude that Factor 2 is describing a section of the non-Kuwaiti population. From their occupation (craftsmen and employed in commerce but not manual labourers), it appears that they are a better educated section of the immigrant community containing a preponderance of males and of married people. These two variables are not irreconcilable since many married non-Kuwaitis are resident in Kuwait but without their wives. Hence we can call this dimension the "Higher status non-Kuwaiti" Factor.

FACTOR 3

The attributes of the populations described by Factor 3 are almost the inverse of the second Factor (Table 9.6). Factor 3 indicates that the third dimension of variance in Kuwait is that containing illiterate, male, Muslim, construction workers or

craftsmen with a large proportion of their total population in the young active age groups. Significantly, a further characteristic is Irani nationality. These people do not live in large centres and do not have jobs as clerks or in commerce. This third dimension, explaining 28.1 percent of the overall variance, can be titled the "lower status non-Kuwaiti" Factor.

Table 9.6 THE COMPOSITION OF FACTOR THREE

HIGH POSITIVE LOADING			HIGH NEGATIVE LOADING		
17.	Construction workers	2.82	37.	Density	1.59
13.	Craftsmen	2.70	21.	Service employment	1.14
7.	Illiterates	2.07	11.	Clerks	0.33
2.	Muslims	2.05	19.	Commerce	0.33
4.	Males	1.93	12.	Sales	0.24
23.	Age 15-39	1.60	38.	Size of centre	0.18
33.	Iranis	1.12			

While these 3 Factors account for 92.0 percent of the total variance, Factors 4 and 5 (explaining only 4.2 and 1.5 percent respectively) are in fact sub-sets of Factors 2 and 3. Factor 4 describes a population of medium status, employed in services but not in construction, containing single people and a male bias. The Factor Score Matrix associates these characteristics with Jordanians.

Factor 5 describes a married population employed in mining, containing young people under 15, and largely Christian. They are people of professional and technical status together with some clerks. Their nationality is Pakistani or Indian. This dimension is describing the characteristics of Ahmadi, as the Varimax Factor Matrix confirms (Table 9.2).

As the foregoing suggest, the analysis proceeds by selecting out the most salient dimensions of variance first of all, proceeding steadily towards the description of smaller and smaller dimensions, sometimes explaining the attributes of only one centre (e.g. Factor 5 with Ahmadi). Our analysis of these Factors cannot proceed indefinitely, so that in the subsequent section only the distribution of Factors 1, 2, and 3 will be discussed, since they contain 92.0 percent of the descriptive power of the original 38 variables.

The Distribution of Factors throughout Kuwait

Plainly, our major interest lies in the distribution of Factors 1, 2, and 3 throughout Kuwait. Two methods of analysis are employed; first, each of the three Factors is plotted separately on a map of the Census areas of Kuwait and its distribution represented chloroplethically. Secondly, groups of similar areas are identified using 3-component graph paper.

VI. THE GEOGRAPHIC DISTRIBUTION OF INDIVIDUAL FACTORS

Factor 1

Since Factor 1 largely describes the Kuwaitis and their attributes, the areas with the highest positive loadings are the Kuwaiti suburbs of Kuwait City (key numbers 9-15), together with the outlying villages of south Kuwait and the east coast. Districts with high negative loadings are conversely those areas most touched by immigration (e.g. the Old City, Ahmadi, and Fahahil). Fig. 9.6 illustrates the distribution of Factor 1.

Factor 2

This Factor, named the "Higher Status non-Kuwaiti" component, selects out those areas of non-Kuwaiti settlement which contain a large proportion of their labour force in craft jobs (e.g. commerce) but with few manual labourers (Fig. 9.7). Hawalli, Farwaniya, and Sharq 1 and 2 with Mirqab in the Old City score highly on this component. Two groups of areas have very low scores on this axis - those districts with a strong Kuwaiti bias (see above), and those districts containing low status manual labourers such as Madina al-Amal and Shuaiba.

Factor 3

It is this latter group which the third component specifies. It includes areas under construction (Idailiya and Salimiya) as well as industrial areas (such as Shuaiba and Shuwaikh), both of which are associated with non-Kuwaitis of working age and of low educational standing (Fig. 9.8).

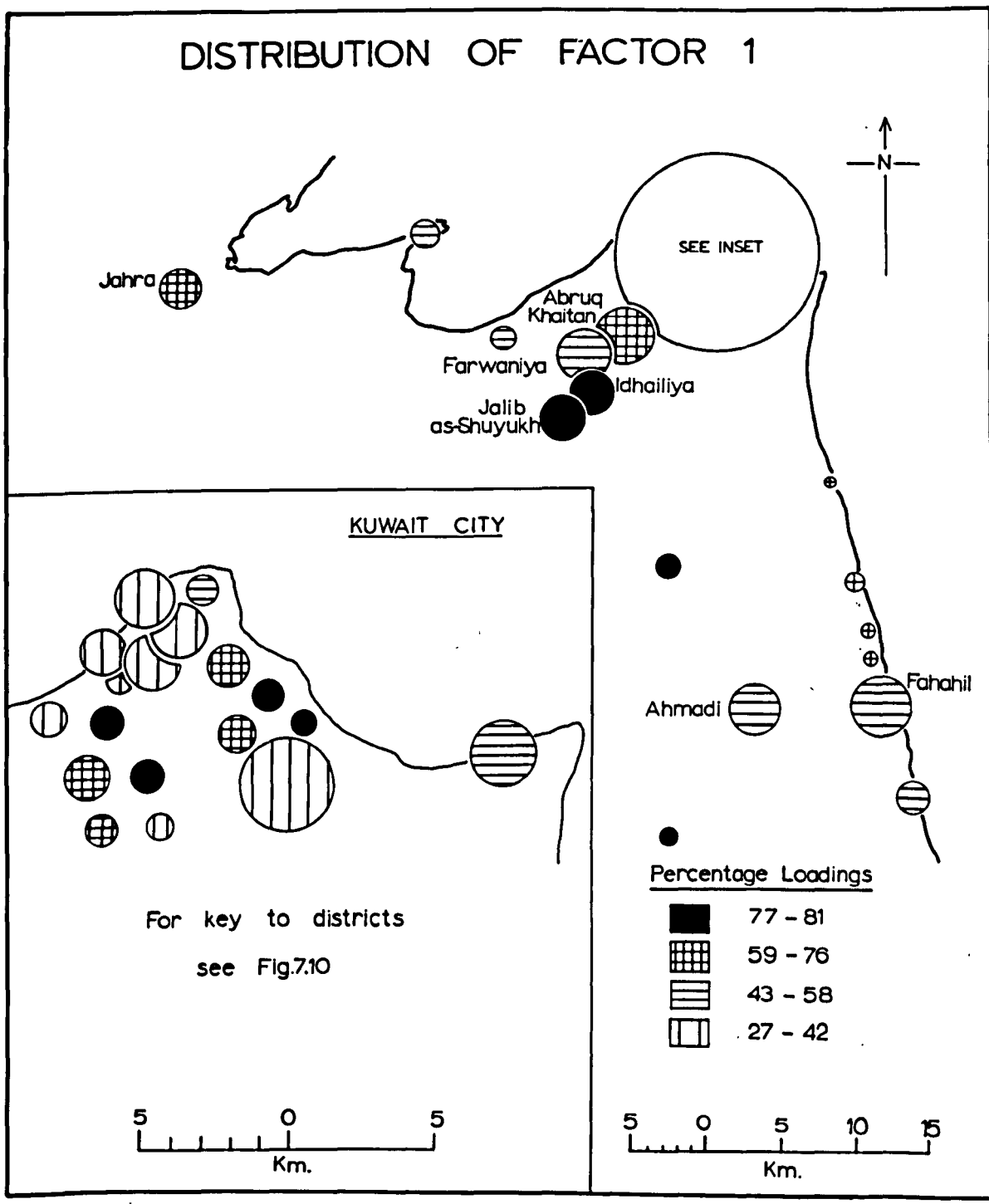

DISTRIBUTION OF FACTOR 1
N
SEE INSET
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
For key to districts see Fig.7.10
Percentage Loadings
77 - 81
59 - 76
43 - 58
27 - 42
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.6

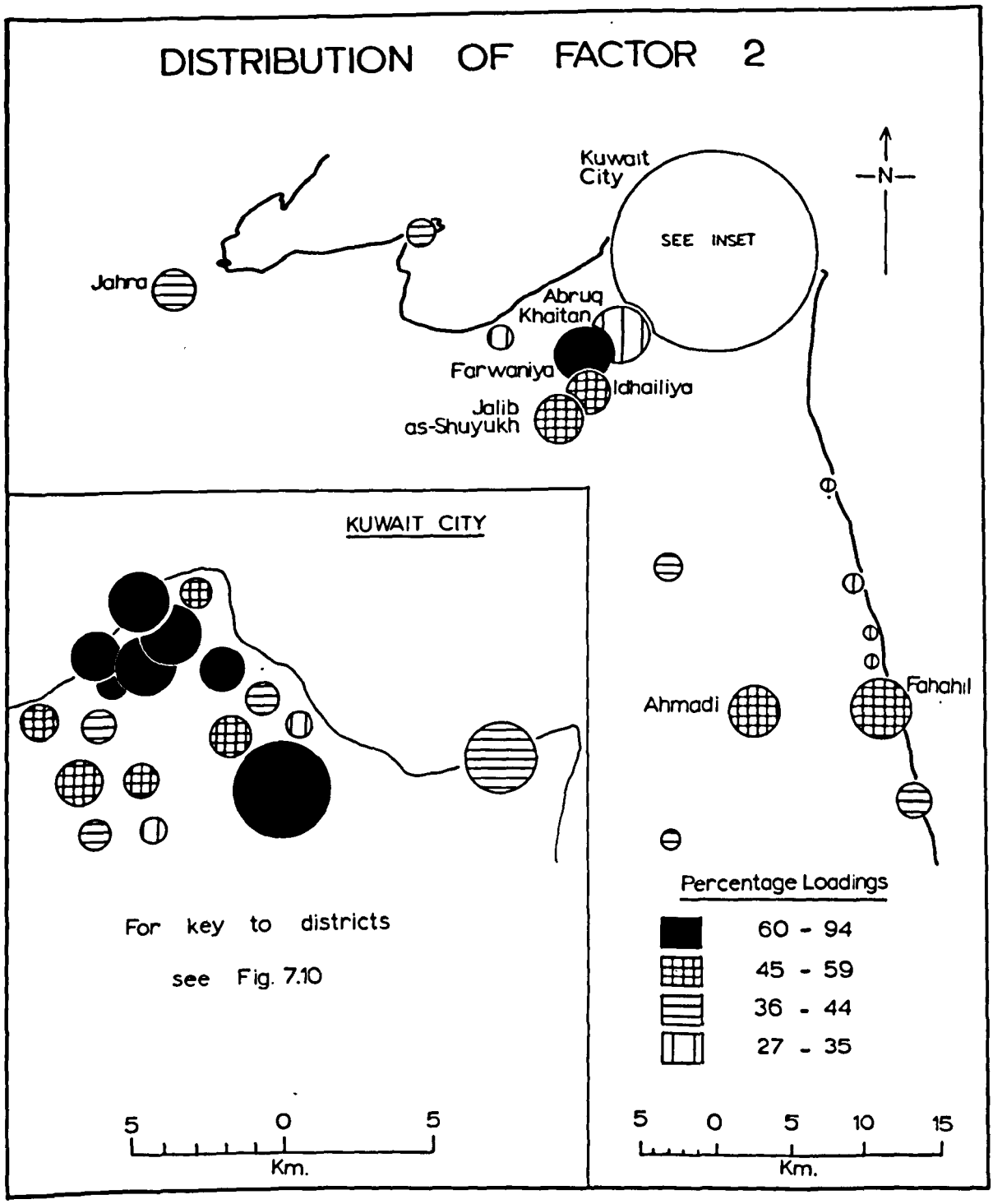

DISTRIBUTION OF FACTOR 2
Kuwait City
SEE INSET
N
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
Percentage Loadings
60 - 94
45 - 59
36 - 44
27 - 35
For key to districts
see Fig. 7.10
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.7

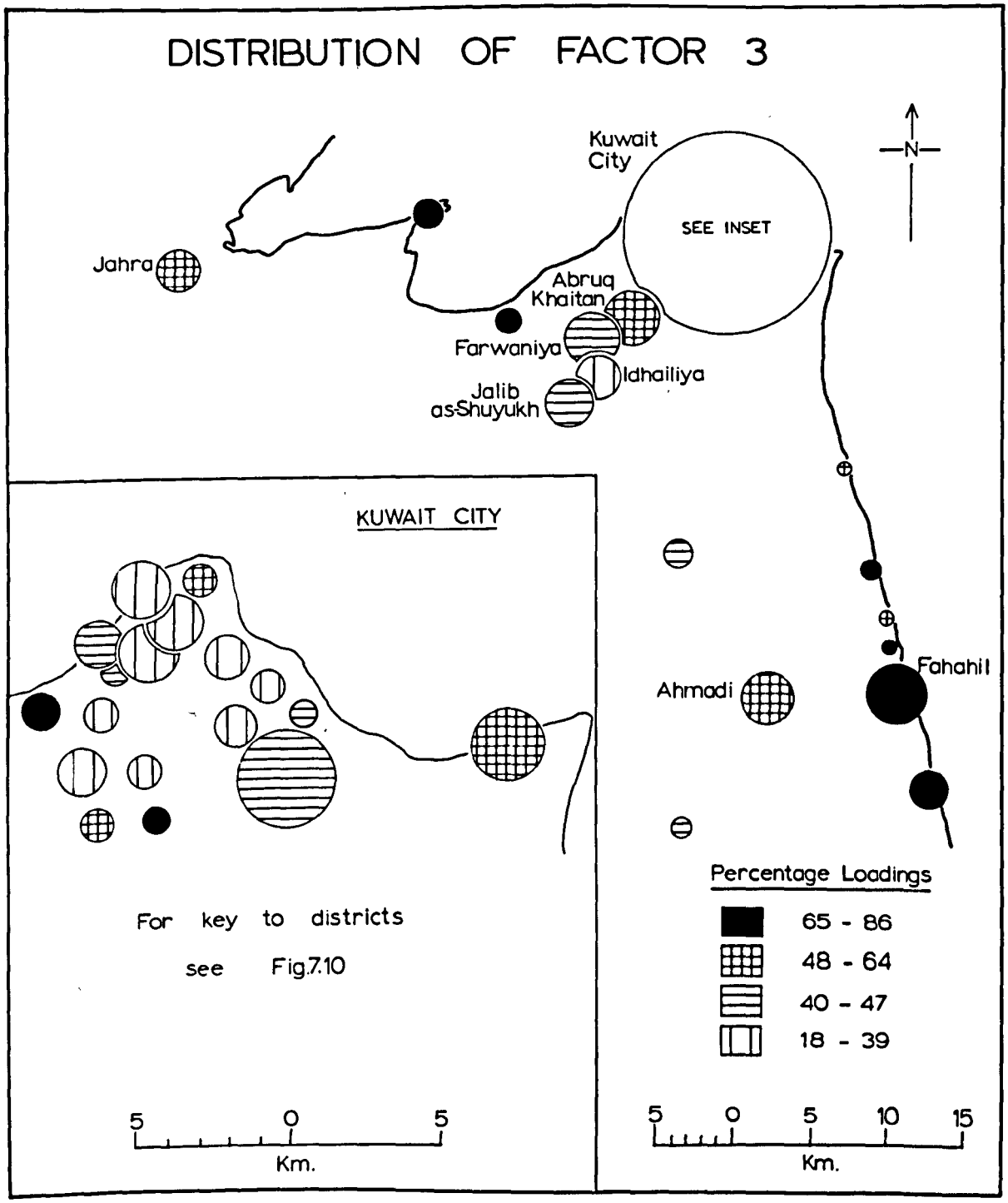

DISTRIBUTION OF FACTOR 3
Kuwait City
SEE INSET
N
Jahra
Abruq Khaitan
Farwaniya
Idhailiya
Jalib as-Shuyukh
KUWAIT CITY
Ahmadi
Fahahil
For key to districts see Fig.7.10
Percentage Loadings
65 - 86
48 - 64
40 - 47
18 - 39
5 0 5
Km.
5 0 5 10 15
Km.

Figure 9.8

VII. COMBINATIONS OF ALL 3 FACTORS

The programme, which provides row-normalized Varimax Factor Components, allows us to plot the distribution of each one of Kuwait's 39 Census areas on triangular co-ordinate graph paper. This diagram (Fig. 9.9) arrays all the 39 areas on the three Factor axes simultaneously, so that groups of areas with similar attributes can be readily distinguished. Four major groupings can be distinguish on the diagram which incorporates 92.0 percent of the dimension of the original 39 x 38 data matrix.

1. 10 AREAS CONTAINING HIGHER STATUS NON-KUWAITIS

Criteria

1. "KUWAITI FACTOR" : Loadings under 40 percent
2. "HIGHER STATUS NON-KUWAITI FACTOR" : Loadings under 30 percent
3. "LOWER STATUS NON-KUWAITI FACTOR" : Loadings over 45 percent

As the chloroplethic map for Factor 3 showed (Fig. 9.8), this group of areas is composed of small outlying villages (Dawha, Manqaf, Fantas, Madina al-Amal) together with new areas under construction (Salimiya, Abruq Khaitan, Sulaibikhat, and Idailiya). As indicated above, building labourers live on site and are hence the dominant demographic groups recorded in the Census for these areas. Idailiya, a new Kuwaiti suburb, has the most extreme loadings on Factors 1 and 3 for this reason.

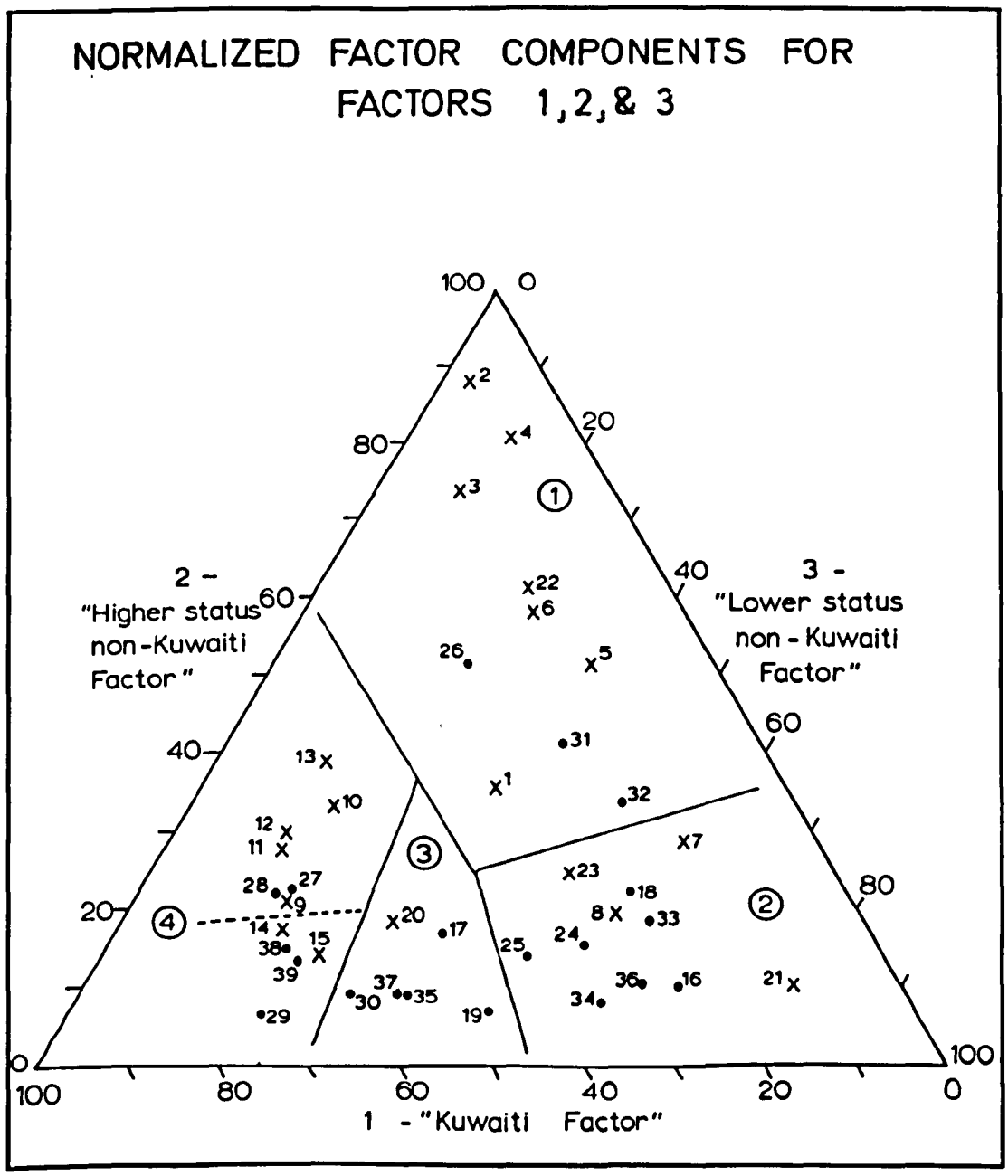


Figure 9.9 : For Key see Table 9.2

3. 6 AREAS CONTAINING HIGHER PROPORTIONS OF KUWAITIS AND SOME LOWER STATUS NON-KUWAITIS

Criteria

1. "KUWAITI FACTOR" : Loadings over 45 percent and under 65 percent
2. "HIGHER STATUS NON-KUWAITI FACTOR" : Loadings under 20 percent
3. "LOWER STATUS NON-KUWAITI FACTOR" : Loadings under 30 percent and under 50 percent

Excluding Khaldiya, a new Kuwaiti suburb in course of construction in 1965, all the areas in this group lie beyond the built-up area of Kuwait City. Most of the districts are old-established Kuwaiti villages (Jahra, Failaka, Abu Halifa, and Funaitis) which remain over 70 percent Kuwaiti in composition, sustaining only slight intrusions of non-Kuwaiti immigrants and most of these associated with the construction industry. Between 22 and 54 percent of the population in all 6 areas can neither read nor write.

This group is not strongly loaded on any one Factor; it does display a low negative loading on the "Higher Status non-Kuwaiti" factor so that the areas included in the group are represented by the distribution of the bottom quartile of Factor 2 (Fig. 9.7).

4. 12 AREAS CONTAINING KUWAITIS AND A SMALLER PROPORTION OF HIGHER STATUS NON-KUWAITIS

Criteria

1. "KUWAITI FACTOR" : Loadings over 45 percent
2. "HIGHER STATUS NON-KUWAITI FACTOR" : Loadings under 40 percent
3. "LOWER STATUS NON-KUWAITI FACTOR" : Loadings under 25 percent

This group of 12 areas consists largely of strongly Kuwaiti areas. We can subdivide the areas into 2 sub-groups on the basis of Factor 2, using the threshold of 20 percent as the dividing line.

Group 4a

Most of this sub-group consists of the Kuwaiti suburbs of Shamiya, Kaifan, Faiha, Qadisiya, and Dasma, together with the new centres of Jalib as-Shuyukh and Idhailiya situated just 3-5 km south of Kuwait City. These suburban areas by 1965 were fairly well established. Scores on Factor 2 are between 20 and 40 percent because of the numbers of non-Kuwaiti houseboys and housemaids (mostly Omanis and Iranis) resident with Kuwaiti families in these areas. These workers employed in domestic services, and sometimes living as a family within a Kuwaiti villa, account for the higher than expected scores of these areas on the "Higher Status non-Kuwaiti" Factor.

Group 4b

By comparison, the 5 areas in this sub-group (Di'ya, Shaab, Shadadia, Maqwa, and Wara) are more exclusively Kuwaiti. Di'ya and Shaab are new neighbourhoods in the suburbs of Kuwait City which in 1965 were still under construction (viz. the loadings on Factor 3 are higher than for Group 4a). Shadadia, Maqwa, and Wara, by contrast, are largely shanty camps where Kuwaiti Badu live. Shadadia is situated just south of Kuwait City but Maqwa and Wara are located on the Burqan oilfield.

It may be that since part of Factor 1 is made up of illiterates that Groups 4a and 4b (from the Kuwait suburbs of Kuwait City to the shanty towns of Maqwa and Wara) are arrayed along a literacy gradient. In Maqwa and Wara, over 40 percent of the males over age 10 could neither read nor write, while an average figure for these suburbs was only 20 percent. Hence, the three-component diagram has added a further dimension to the 3 Factors already indicated. This dimension is apparently reflecting a trend towards higher literacy amongst Kuwaitis in the suburbs. Since literacy is associated with other indicators of advancement (e.g. economic activity and status of employment), we can call this gradient recognized amongst Kuwaiti areas a "modernization" axis.

VIII. FACTOR ANALYSIS AND THE STRUCTURE OF KUWAIT CITY

Having indicated the dimensions of socio-economic variance throughout Kuwait, we can return again to the examination of the detailed structure of Kuwait City. Greater Kuwait, the built-up area within the fourth ring road, comprises 19 Census tracts, all of which have been employed in the foregoing factor analysis (Fig. 7.1). A distinctive symbol has been used on the 3-component graph (Fig. 9.9) to bring out those districts within Greater Kuwait.

The diagram shows that the 19 areas composing Kuwait City are widely dispersed on all 3 Factors. Indeed, within Kuwait City we are dealing with a degree of social and economic heterogeneity at least as large in the State as a whole. Conversely, if we consider only the centres other than those included in Kuwait City, Fig. 9.9 shows that most of their variance can be represented on Factors 1 and 3 without reference to Factor 2. In other words, the dimension of Factor 2, "Higher status non-Kuwaitis", is largely restricted to Kuwait City. There are three notable exceptions to this generalization - Ahmadi, Fahahil, and Farwaniya. The latter is a special case since it acts as a non-Kuwaiti dormitory town for Kuwait City, while the other two are directly involved with the oil industry. Hence all three contain a sizeable proportion of "Higher status non-Kuwaitis".

Considering the distribution of the districts of Kuwait City on all three axes simultaneously, we can use the same four divisions empl oyed in the analysis of the Factors for the whole State.

IX. SOCIAL AREAS IN KUWAIT CITY

While Figs. 9.6-8 show the distribution of areas chloroplethically for single Factors, our concern is to group the district of Kuwait City into sets of similar and dissimilar areas.

1. THE OLD CITY AND OTHER AREAS OF IMMIGRANT INVASION

The same criteria as were used to define Group 1 above again apply. Within the Group (the Old City with Shuwaikh and Hawalli) considerable variation is recorded, particularly on Factor 3 (Fig. 9.9). Dasman is clearly the most cosmopolitan area in Kuwait with almost equal loadings on all 3 Factors. Sharq 1 and 2, and Mirqab, contain a heavy loading on the higher status immigrant axis and low loadings on the lower status immigrant axis. New housing developments - both flats and bungalows - are attracting, for example, Britons and Americans, Indians, Pakistanis, and Jordanians in sizeable numbers, all of whom have a relatively high level of education and social status. In 1965 these nationalities together numbered 26,660 in the Old City of a non-Kuwaiti total of 70,340 (Census of Population 1965, Table 2).

Interestingly, the analysis closely associates Salihiya and Qibla with Hawalli. All three areas score under 20 percent on Factor 1, medium-high loadings on Factor 2, and low loadings (under 40 percent) on Factor 3. From Tables 9.4-6, showing Factor composition, it seems that these areas contain a variety of people, but in the main married non-Kuwaiti Muslims with medium status jobs - possibly Jordanians.

Finally, the widespread construction activity in Dasman (including the building of a Hilton Hotel) involves manual labour, thus raising the area's loading on Factor 3.

2. AREAS UNDER CONSTRUCTION WITH LOW-STATUS IMMIGRANTS

As indicated previously, Factor 3 consists primarily of illiterate male craftsmen construction workers, probably Iranis. Sulaibikhat, Idailiya, and Salimiya were all in course of construction in 1965 and thus score highly on this Factor. With Shuwaikh the explanation differs slightly since the area contains the docks, several factories, and some small workshops. In all three tasks, male manual labour is required.

3. STRONGLY KUWAITI AREAS

Factor analysis reveals that the new Kuwaiti neighbourhoods (Shamiya, Kaifan, Faiha, Qadisiya, Dasma, Di'ya, Shaab, and Khaldiya) stand out clearly as the most distinctive group of areas in the city, much as one would expect in view of the policy of

discrimination against non-Kuwaitis. Some invasion of the oldest inner suburbs (e.g. Shamiya and Kaifan) by higher status non-Kuwaitis is taking place, probably in association with domestic services (see above) and the new co-operative shopping centres (Chapters 10 and 11). Khaldiya is quite heavily loaded on Factor 3 because both housing developments and the buildings for Kuwait University were under construction in the district at the time of the Census.

Equipped with this statistical information on the social areas of Kuwait City, we can return to the issues raised at the outset of this Chapter concerning city structure and the location of the rich and the poor classes of society. If Kuwait is to parallel the idealized model suggested for non-Western cities, as suggested by Berry (1963) and Sjoberg (1960; and in : Hauser & Schnore 1965), then we can expect high-status areas to be located in or near the city centre with a downward gradation in social class towards the periphery.

X. THE STATUS OF KUWAIT'S RESIDENTIAL AREAS

There are two major difficulties involved in rank-ordering Kuwait's residential areas by status.

(i) The size of the 19 Census areas describing the attributes of the population of each district are unfortunately larger than the "Census tracts" or "enumeration districts" usually employed in social area analysis in the United States (Tryon 1955) or Britain.

Despite attempts to subdivide these areas, the data storage system in Kuwait prohibits easy extraction of variables for sub-areas. Inevitably, therefore, the districts each contain a less than socially homogeneous population.

(ii) Within Kuwait City we have as wide a range of social variance as in the whole State. In addition, factor analysis revealed that the prime axis of social division was a Kuwaiti - non-Kuwaiti gradient. As early Chapters have shown (especially 5 and 6), in Kuwait we have two strongly contrasted populations - citizens and aliens - resident in the same city. Clearly generic comparison between these two populations is a difficult task.

We can begin a form of rank-ordering of the social areas of Kuwait by plotting predominantly Kuwaiti and predominantly non-Kuwaiti areas on two separate axes - Factors 1 and 3 respectively (Table 9.7). These two axes describe the status of both groups of areas (see Factor Composition, Tables 9.4 and 9.6 above). Very little variation on Factor 1 is recorded for the 8 Kuwaiti areas - the lowest and the highest areas are only separated by 15 percent on Factor 1 (Table 9.7). By comparison, the non-Kuwaiti areas have percentage variation covering 74 percent. Apparently the Old City (6 areas) and Hawalli contain the higher status.

Table 9.7 KUWAITI AND NON-KUWAITI AREAS RANKED ON FACTORS 1 AND 3 RESPECTIVELY

Kuwaiti Areas ranked on FACTOR 1		Non-Kuwaiti Areas ranked on FACTOR 3	
Percentage loading	District	Percentage loading	District
64	Di'ya	3	Sharq 1
62	Shaab	10	Sharq 2
62	Shamiya	11	Mirqab
59	Faiha	23	Hawalli
58	Qadisiya	25	Qibla
52	Khaldiya	33	Dasman
51	Kaifan	35	Salihiya
49	Dasma	45	Salimiya
		53	Sulaibikhat
		57	Shuwaikh
		77	Idailiya

N.B. High status areas appear at the top of both lists

Thus, it seems that we can treat all 8 Kuwaiti areas as socially homogeneous with little variation in the status of individual areas. Non-Kuwaiti areas display a much greater degree of variation in status, but no clear-cut gradient from

the city centre to the suburbs can be discerned. There is apparently no way of reconciling the rank-ordering of the Kuwaiti and non-Kuwaiti districts. No graduation of areas can be discerned by plotting either Factor 1 on Factor 2 or Factor 1 on Factor 3. In conclusion, it appears that Kuwait City is a dualistic unit lacking a degree of social integration amongst its constituent parts. Segregation of housing areas and the influx of immigrants from disparate geographic and cultural sources have produced an urban ecological structure quite untypical of Western cities.

XI. INTERNATIONAL PARALLELS

This study of the social areas of Kuwait draws attention to the limitation of Western-derived theory to describe the urban ecology of an Oriental City. However, in the Orient as a whole, several case studies are available which indicate that the structure of Kuwait's built-up areas has parallels elsewhere in the East.

Breese (1966) in a survey entitled "Urbanization in Newly Developing Countries" has an important section of Indian cities, particularly Delhi. There, an influx of refugees after partition produced a characteristic grouping of squatters' areas located on open spaces near the city's edge (p.62-3). In addition, high class suburban housing is being added at random to the periphery of most larger Indian cities (p.69), providing a stark contrast to the overcrowded and deteriorating Old City. In a sense

Kuwait possesses the same three areas - shanty towns (e.g. Maqwa and Wara), new suburbs, and the Old City - although the quality of buildings and social amenities in all three areas is much higher in Kuwait than in other developing nations of Asia.

Again from India, Brush (in : Turner, 1962, pp.67-70) cites several examples of dual urban development arising from culture contact - specifically, the British period. Subsequent planned developments (e.g. at Modinagar, Jamshedpur, and Chandigarh) are resulting in the emergence of self-contained cells with one land use per block. Both dualistic development and strongly segregated land uses are characteristics of the Kuwait urban area. (This point concerning commercial dualism will be enlarged upon in the subsequent two Chapters.)

From South-East Asia, McGee (1967) indicates that dualism is a characteristic of both economic activities ("bazaar-type" and "firm-type" economies) and residential development. He writes :

> "The major element of the colonial city was the mosaic of ethnic quarters - the tightly packed shop-house areas of the Chinese, the spacious low density 'compounds' of the Europeans, and the rural-like villages of the indigenous population scattered around the fringes of the city. The rapid growth of the population of the cities in the postwar era, associated with the socio-economic changes which are creating an emergent middle

> class, have caused a proliferation of squatter settlements in the interstices and fringes of the city, as well as the growth of western-type suburbs, adding new elements to the residential ecology of the city. In the process some of the lines between the various racial enclaves have become a little blurred, but overall ethnic concentration is still responsible for the major divisions in the residential areas of the city." (McGee 1967, p.139).

Thus Kuwait's urban ecology, as brought to light by factor analysis, is by no means exceptional in the context of non-Western cities in that racial and national groupings are the elements most strongly underlying the city's structure. While Western-derived theories relating to the ecological structure of cities in the Orient proves inadequate to explain the structure of Kuwait City, it seems that there are several close parallels of the situation in Kuwait from at least two major regions of Asia.

CONCLUSION

At several stages of this analysis of Kuwait's urban development reference has been made to the dissimilarity between urbanization in Western and non-Western areas. In this Chapter it seems we have a strong statistical base for drawing conclusions on Kuwait's urban structure. Despite exceptional trends, such as

the evacuation of Kuwaiti citizens from the Old City into the suburbs, Kuwait's experience closely parallels that of several widely scattered Asian countries. Factor analysis revealed that within Kuwait City, quarters containing a majority of Kuwaitis had such different socio-economic characteristics from quarters containing a majority of non-Kuwaitis that the two districts were incomparable using the three major components of variance extracted from the original 39 x 38 data matrix. Increasingly, we are led to the conclusion that cities of the Third World generally - with Kuwait among them - possess attributes and characteristics peculiar to themselves. But before progressing further with this argument, we require an analysis of the functioning of the parts of the city and of the urban areas beyond which were identified above. Only this form of analysis can provide a firm quantitative foundation for our final conclusions on the nature and form of Kuwait's urban development.

CHAPTER TEN

CENTRAL PLACES AND THEIR RELATIONSHIPS :

I. THE DISTRIBUTION AND TYPE OF SERVICE ESTABLISHMENTS IN KUWAIT

Introduction

The foregoing Chapter presented a statistically biased description of the dimensions of social and economic differentiation throughout Kuwait. While groups of similar areas were identified and contrasted with dissimilar areas, the analysis remains fundamentally static since it was largely based on a selection of Census variables for only one year - 1965. Chapters 7 and 8 traced the evolution of the physical fabric and other characteristics of urban areas in Kuwait : the purpose of Chapter 10 is now to describe the interrelationships between the different areas identified in previous Chapters by an analysis of their contemporary functions. This Chapter considers the distribution and special characteristics of service establishments throughout the State. Chapter 11 presents a fuller quantitative analysis of consumer behaviour in Kuwait, together with an investigation of the causal factors involved in the determination of shopping patterns in an oriental situation such as Kuwait.

Most cities are important service centres, providing for the needs of their inmates as well as for the needs of the population in the hinterland beyond. In Kuwait, the service function is

particularly important since at least 68 percent of those gainfully employed are involved in the provision of services (Chapter 4). Clearly, using any of the established classificatory systems for cities (e.g. Harris 1943; Nelson 1955; Alexandersson 1956; and Jones et al 1963), Kuwait City figures as a service-based unit with a notable dearth of manufacturing activities. For this reason we are justified in laying greatest stress on the functions associated with the services sector in Kuwait and in comparing the roles of sections of the city in which service needs are generated with those sections where such needs are satisfied. This spatial differentiation between where demands originate and where they are met is the basic rationale underlying any system of "central places" in all parts of the world.

I. MOVEMENTS

People ebb and flow in a city to fulfil three main needs : the need to journey to their place of work; the need to buy essential goods and services; and finally to obtain non-essential goods and services, i.e., recreation activities. In this section, only the first and last movements will be considered since the need to buy essential goods and services in Kuwait is so important both economically and socially to warrant separate attention in Chapter 11.

a) Journey to Work

In Kuwait, employment is available in three major categories. First, the Government is a major employer in a whole variety of Ministries and State-owned enterprises (e.g. Kuwait Airways). Second, private establishments, though generally small, account for a large proportion of total employment. Finally, the oil companies sustain a considerable number of employees in a category by themselves.

Fortunately, the precise locations of most of the working Government and non-Government establishments are known. A Census of Government Employees was published in 1967 providing full details of place and mode of employment of officials and employees on the Government payroll. This Census's main limitation is that it omits labourers from its consideration, of whom there were 22,000 in State-employ in 1964 (Statistical Abstract, 1965, Table 46). Altogether in 1964, 60,766 were shown as employees of the State in all grades compared with 30,819 "officials" and "employees" only in 1966 (Census of Government Employees, 1966, Table 1). In 1966, 12,718 of these 30,819 employees (41 percent) were employed within the Old City. Assuming that the number of manual labourers has increased proportionally with the number of officials and employees, it would seen that approximately 25,000 people are employed daily by the State in Ministries and Departments within the confines of the Old City.

As for employment in non-Government establishments, 26,863 of the total of 68,433 (almost 40 percent) are employed inside the Old City. Together, Government and non-Government employment provides over 50,000 jobs daily in the centre of Kuwait City. Clearly, this concentration of almost half of all the jobs in Kuwait (excluding the oil sector) within a tiny area (8 sq.km.) of Kuwait City leads to an enormous daily influx and exodus of population. With less than one-third of the city's total population resident inside the Old City, the remainder - scattered over the 71.7 sq.km. comprising Greater Kuwait - have to commute daily to their place of work.

As the population distribution map suggests (Fig. 7.10), the pattern of population movement is relatively simple. Fig. 10.1 shows the provision of employment by districts in Government and non-Government establishments using proportional circles for comparison; a radial movement is suggested by these two maps, inwards in the early morning and outwards at the end of the working day. Shuwaikh, the industrial area west of the city centre and containing the power generating and water distillation plants, is apart from the Old City, the only other centre providing over 10,000 jobs daily. Shuwaikh provided a total of 12,113 jobs, compared with only 7,800 in Hawalli and 3,900 in Sulaibikhat (Census of Establishments, 1965, Table 1; and Census of Government Establishments, 1966, Table 9j).

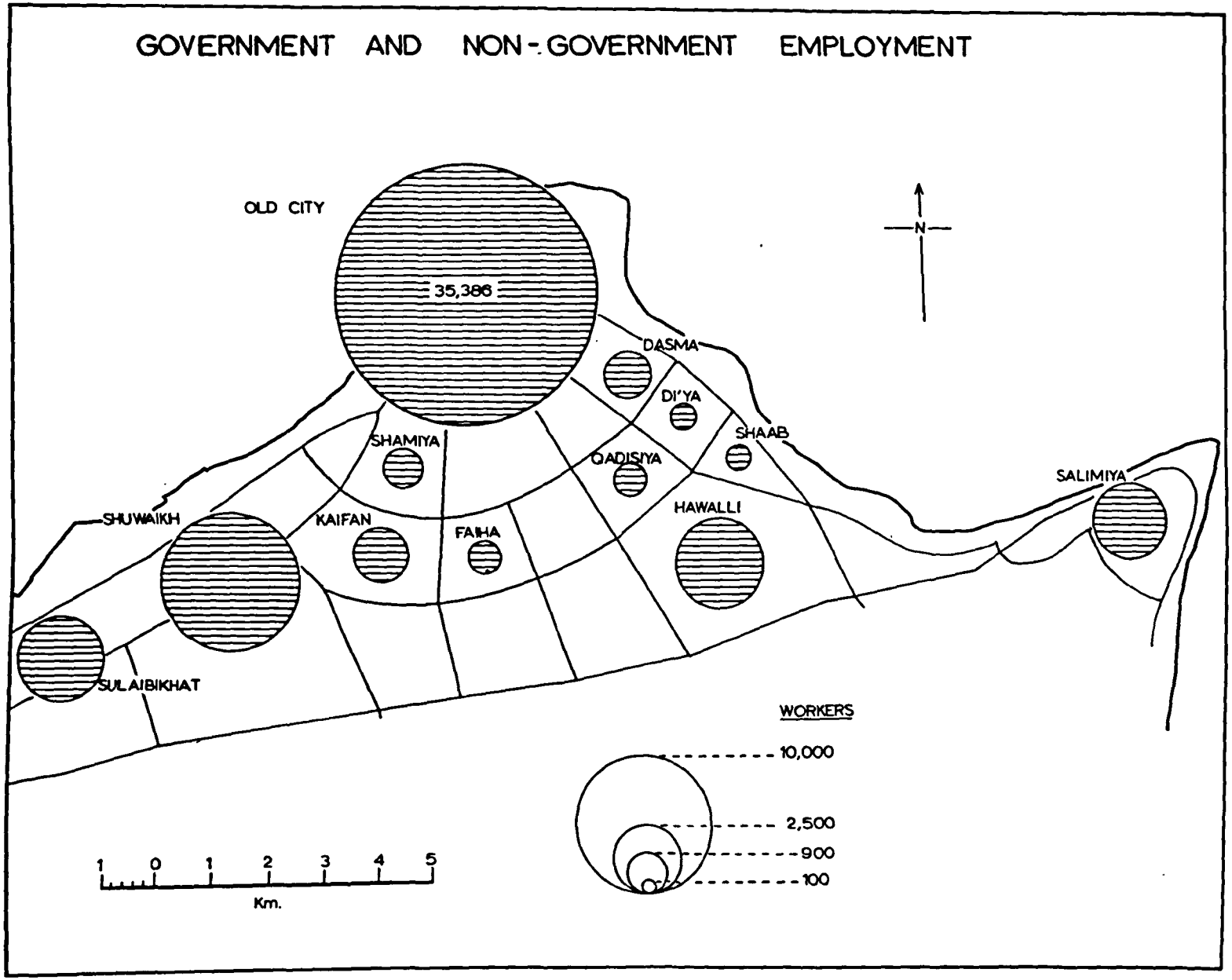

GOVERNMENT AND NON-GOVERNMENT EMPLOYMENT
OLD CITY
35,386
DASMA
DI'YA
SHAAB
SHAMIYA
QADISIYA
SALIMIYA
SHUWAIKH
KAIFAN
FAIHA
HAWALLI
SULAIBIKHAT
N
WORKERS
10,000
2,500
900
100
1 0 1 2 3 4 5
Km.

Figure 10.1

A detailed traffic survey is in progress and as yet the data are lacking to confirm these general conclusions. Observations in the field confirm the assumptions above. The working day in Government offices and most other private establishments not concerned with retailing extends from 7.30 a.m. to 1.30 p.m. from Saturday to Wednesday, with a shorter day on Thursdays, and a day's holiday on Fridays. Just before the beginning of the working day, and just after its conclusion, the traffic on the radial roads, especially Riyadh Street and Morocco Street (Fig. 7.1), increases to ten times its normal mid-morning intensity and congestion occurs at the major intersections. There are few cross-city movements for, as Figs. 7.10 and 10.1 suggest, the influx and exodus of people at these times concerns most of the working population. Other movements (e.g. shopping and recreation trips) will be dealt with below.

As for oil company employment, most of the employees live very close to their place of work in south Kuwait. Ahmadi is the place of work and residence for employees of K.O.C. - by far the largest oil concern in Kuwait. Some reciprocal movement takes place between Fahahil and Ahmadi although at different hours than movements in Kuwait City. K.O.C. works from 7.30 a.m. to 4.30 p.m. with a short lunch-break at mid-day.

b) Recreational Trips

Three main types of journeys for recreational purposes can be discerned :

i) Evening visits by single males and to a lesser extent, families, to cinemas or restaurants.

ii) Friday trips for picnics, either on the east coast or into the desert.

iii) Long weekend or Feast Day visits across the border to Iraq.

To this list can be added rarer visits to more distant foreign countries, e.g. for visits to relatives (especially concerning non-Kuwaitis); for the Pilgrimage to Mecca; and for summer holidays.

While statistical data on all such trips is lacking except for international arrival and departure figures (Chapter 5), clearly all trips excluding those in (i) above involve visits beyond the urban areas. With evening visits, most of the attractions, especially cinemas, are located within the Old City although Hawalli contains two cinemas and a number of other attractions (e.g. cafes). In conclusion, it must be added that frequent trips are made to visit friends scattered throughout the urban area because of the system of land allocation in the suburbs (Chapter 7). With almost one car per household, most of these and other trips cited above are made by this means.

II. THE PROVISION OF SERVICE FACILITIES

(a) Theory

The study of central places and of the relationships between such places has received close attention by geographers in recent years. From the great volume of case studies available (see Berry & Pred's "Bibliography" of 1965 for a conspectus), it is apparent that between components of the central place system such as the population, the number of service establishments, and the variety of these establishments in selected centres, there are precise mathematical relationships. These relationships have been confirmed by a wide variety of independent workers.

While the central place system is an established concept in the Western world, there are few attempts on record to define its applicability in a non-Western context. Thus, an investigation of the nature of central places in Kuwait was undertaken in order to test the general validity of some of these Western-derived theories in an area beyond their region of origin. Initially it was predicted that the mobility of the Kuwait population, its high level of affluence, and its distinct cultural background would produce a system of central places linked by a pattern of inter-centre movements both quite distinct from previously studied Occidental examples.

(b) Problems

There are several fundamental components of any system of central places such as : the type and distribution of shopping facilities; centre populations; and information on land values, rents, cash turnover, and consumer behaviour. Of all these variables, only one - centre populations - was immediately available in Kuwait. Thus a series of field studies were designed and fulfilled to provide the required information on these and several related topics.

Special problems are attached to fieldwork in an Oriental context. In the West we are accustomed to the need for research into our physical and social environment by a variety of enquirers - planners, sociologists, government agencies, and research students. Elsewhere, the population is not so conditioned with the result that the researcher often encounters suspicion and hostility from the police and the populace at large. In Kuwait, despite an atmosphere of unease created by the aftermath of the Arab-Israeli War of 1967, the researcher encountered relatively few obstructions in the course of the field enquiry. Nevertheless, detailed mapping of the shops in the bazaar aroused the hostility of several proprietors, resulting in frequent arrests by the police. In response to enquiries about shopping behaviour, threats of violence were not uncommon. These problems, including the over-riding difficulty of conducting all enquiries in Arabic, have to be considered when planning such survey work in an Arab city today.

III. THE DISTRIBUTION AND TYPE OF SERVICE ESTABLISHMENTS IN KUWAIT

In 1965, the Census of Establishments in the State of Kuwait recognized 10,548 working units in Classes 611, 612, 62, and 85 (wholesaling of foodstuffs and clothing; retailing; and personal services respectively). Unfortunately, further statistics were unavailable in the Census for these Classes except number of employees and capital employed. The Census showed that 12,116 people were employed in these 10,548 establishments, indicating the very small size of most of them.

A field survey was begun by classifying every establishment dealing in retail trade or personal services in Kuwait. Previous classifications (e.g. U.K., Min. of Labour, 1965) proved inoperable although important distinctions recognized (i.e. between food and non-food shops) were retained. After trial and error, the classification listed in Table 10.1 was evolved and applied to the range of establishments observed in Kuwait. Each establishment was located on maps at a suitable scale (kindly provided by the Municipality) and its code number from Table 10.1 placed alongside it on the map. Despite numerous field difficulties, including numerous arrests on a variety of charges, including spying, this first part of the survey yielded information on the function and location of every service establishment in Kuwait; in all, 11,257 such establishments were individually located and classified, comparing favourably with

the Government survey in 1965 which recognized 10,548 such establishments.

Table 10.1 CLASSIFICATION OF RETAIL SERVICE TYPES IN KUWAIT

A. CLOTHING

1. Women's shoes
2. Cloth for women's clothes
3. Women's and children's clothes
4. Men's shoes
5. Material for men's clothes
6. Men's coats and secondhand clothes
7. Men's accessories
8. Men's clothing
9. Tailors
10. Cheap woollens and cottons, bags, towels etc.
11. Bisht (Cloaks) - sales and tailoring
12. Agals, headcloths and traditional dress

B. FOOD AND DRINK

13. Wholesale foodstuffs
14. Groceries
15. Groceries - no food (soap etc.)
16. Cigarettes in bulk
17. Sweets and biscuits
18. Cafe - cooked food
19. Bakery
20. Butchers
21. Fish stall
22. Vegetables and fruit
23. Fodder - jit

Table 10.1 (Contd.)

C. PERSONAL SERVICES

24. Barbers
25. Toilet goods
26. Chemists
27. Perfume
28. Jewellery
29. Watches and watch repairs
30. Novelties - combs, toys, plastic bits and pieces etc.
31. Money changer
32. Record sales
33. Electrical goods - radios etc.
34. Books and Stationery
35. Guns and Ammunition
36. Laundry
37. Shoe repairs and leather sewing
38. Photographic equipment
39. Photographic studio
40. Car sales
41. Car accessories - tyres etc.
42. Car repairs - garage
43. Opticians
44. Travel agents
45. Bank
46. Hotel
47. Ladies Hairdressing

Table 10.1 (Contd.)

D. HOUSEHOLD WANTS

48. Hardware - utensils
49. Tools, screws, and rope
50. Chandlers - coffee pots, rope, hose, tent poles, canvas, black cloth
51. Paint and oil
52. Carpets
53. Larger electrical appliances, stoves etc.
54. Cooking stoves and heaters - oil
55. Furniture
56. China and Glass
57. Mattresses
58. Blankets and covers
59. Trunks and cases
60. Plastic coverings and lino
61. Earthenware pots
62. Glaziers and picture framers
63. Sanitary ware
64. Sports equipment
65. Haberdashers
66. Cushion making
67. Doctors or Dentists
68. Office and Shop Equipment

Table 10.1 (Contd.)

D. HOUSEHOLD WANTS (Contd.)

69. Sewing machines

70. Beds

71. Bicycles

72. Carpenters

73. Car Seats and Trimmings

74. Electrical Machinery

75. Garden Supplies

76. Sign Writer

77. Electrical Workshop

78. Brass and Silverware

79. Charcoal and Coal

80. Live Chickens and Pigeons

81. Driving School

82. Store

83. Office

84. Vacant at Survey

85. Supermarket

86. Department Store

a) Measurement

Ideally the floor space of each establishment should have been measured to give a wholly accurate description of the total space devoted to selling. However, this was beyond the capability of the researcher since 11,257 units were involved in the survey. Some alternative measure of shop size was necessary and this was achieved by expressing all shops as multiples of the smallest one recognized. In Kuwait, the shops and stalls in the suq are, in frontage and floor space, the smallest in the State. Thus, in the survey, five grocery shops recognized in Fahad as-Salim Street, for example, means that the total frontage of grocery shops in that street is equivalent to five times that provided by one grocery shop in the suq.

For the purposes of this study the area devoted to selling is of greater importance than the details of shop ownership. All shop counts achieved by this method are directly comparable throughout the State.

b) Distribution

Table 10.2 presents the summarized results of the field survey. From this table it is clear that shops and service establishments are heavily concentrated in the Old City : 54 percent (6,088 units) of all shops in the State were located within its confines. These 6,088 units are not evenly spread throughout the Old City for within Commercial Areas 1 - 9, the

core of the suq with some modern additions, can be found 3,577 establishments, one-quarter of the State total. Surprisingly, Fahad as-Salim Street (Plate 7.11), designed and built as a new shopping precinct with spacious modern shops, contains only 587 units. The bazaar or suq still contains many more retail outlets than any other district in Kuwait. We can expect this to have a bearing on subsequent studies of the central place hierarchy.

In the suburbs, Salimiya with 1,391 shops, and Hawalli with 1,583, concentrated the majority of the shops counted (3,209). Table 10.2 points to a notable deficiency of shops in the new suburban neighbourhoods. Evidently, less severe planning control in Hawalli and Salimiya has encouraged numerous commercial establishments to spring up. In all the suburbs, many of the small grocery shops are located in what were designed as the garages of private houses. Even Laundries and bakeries were using modified garages as business premises.

Beyond Kuwait City, Fahahil with 586 shops, emerges as the most important shopping centre, yet in proportion to the Old City the total is small. Abruq, Khaitan, Farwaniya, and Jahra are the only other centres with over 200 establishments. Fig. 10.2 summarizes this distribution of shops and service facilities in map form.

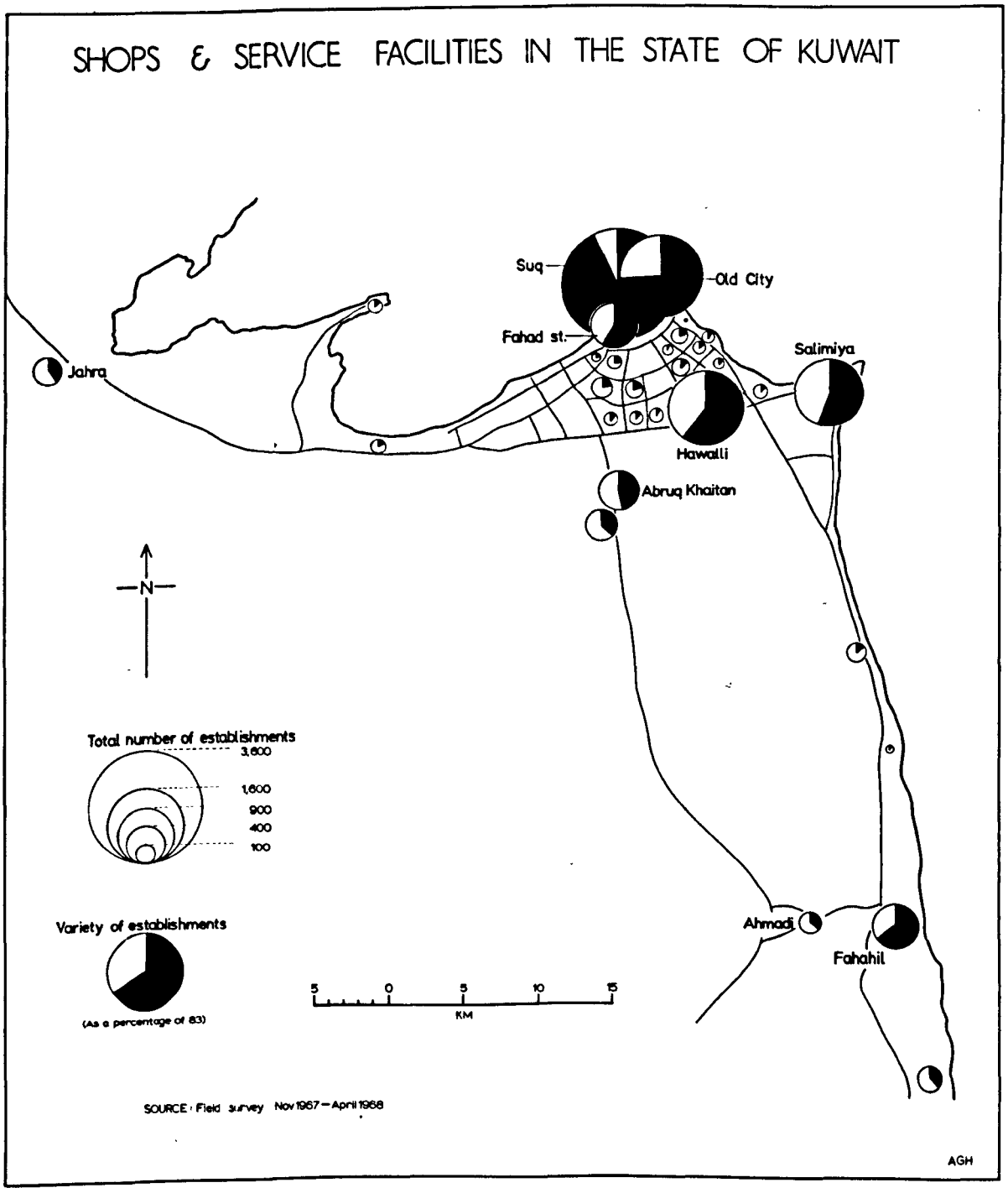

SHOPS & SERVICE FACILITIES IN THE STATE OF KUWAIT
Suq
Old City
Fahad st.
Salimiya
Jahra
Hawalli
Abruq Khaitan
N
Total number of establishments
3,600
1,600
900
400
100
Variety of establishments
(As a percentage of 83)
5 0 5 10 15
KM
Ahmadi
Fahahil
SOURCE : Field survey Nov 1967 – April 1968
AGH

Figure 10.2

Table 10.2 SUMMARY OF THE RETAIL STRUCTURE OF KUWAIT

District		Number of shop types	Number of establishments	"Index of Variety"
Commercial Areas 1-9 (The suq)		79	3,577	452
Fahad as-Salim Street		49	587	119
Rest of Old City		65	1,924	296
Total Old City		86	6,088	707
Suburbs :	Shuwaikh	13	23	17
	Shamiya	19	50	26
	Mansuriya	3	12	40
	Dasma	18	80	46
	Kaifan	19	107	56
	Faiha	17	79	46
	Qadisiya	10	80	80
	Di'ya	11	51	46
	Istiqlal	5	32	64
	Khaldiya	7	45	64
	Idailiya	8	98	80
	Shaab	8	28	35
	Hawalli	53	1,583	298
	Salimiya	41	1,391	339
Towns & Villages :	Abruq Khaitan	39	454	116
	Abu Halifa	6	13	21
	Dawha	7	41	58
	Fahahil	60	586	97
	Fantas	11	32	29
	Farwaniya	30	280	93
	Manqaf	1	1	-
	Jahra	33	205	62
	Maqwa	4	13	32
	Shuaiba	31	165	53
	Sulaibikhat	13	52	40
	Ahmadi	36	118	33
State Total		86	11,257	1,309

Calculated from : Field Survey, October 1967 - April 1968

c) Variety

Two measures of the variety of shops available in any single centre have been evolved. The first is an "Index of Variety" calculated for any centre thus :

$$\text{"Index of Variety} = \frac{\text{Total number of establishments}}{\text{Number of shop types}} \times 10$$

A high Index indicates that a centre provides a wide range of shop types, and a low Index indicates that the choice of shops in an area is very narrow. This Index, by differentiating centres by the range as well as the number of facilities which they provide, indicates levels in the hierarchy of shopping centres confirmed in subsequent studies.

Unfortunately, this Index, while providing some analysis of the range of facilities available in any one centre, does not consider specific types of shop. Altogether, as Table 10.1 shows, 86 types of shop were recognized in Kuwait. By plotting the number of each type of shop by individual districts in graphical form, a visual comparison of the total range of all shopping facilities in Kuwait can be obtained. This was done for the Kuwait data using a graphical technique borrowed from palynology and adapted for a computer (Hill & Squires, forthcoming). The graphs for 29 centres in Kuwait showing the percentage of each shop type in these 29 areas are presented as Figs. 10.3 to 10.6.

Figure 10.3 The Suq

Key:

Com 1 - 9 - Commercial Areas 1 - 9

C 1/9 - Total for all 9 Commercial Areas

COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
C1/9
SHOPS
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90

Figure 10.4 City and Suburbs

Key:

Fsst - Fahad as-Salim Street

Rooc - Rest of Old City

Shuw - Shuwaikh

Sham - Shamiya

Mans - Mansuriya

Dasm - Dasma

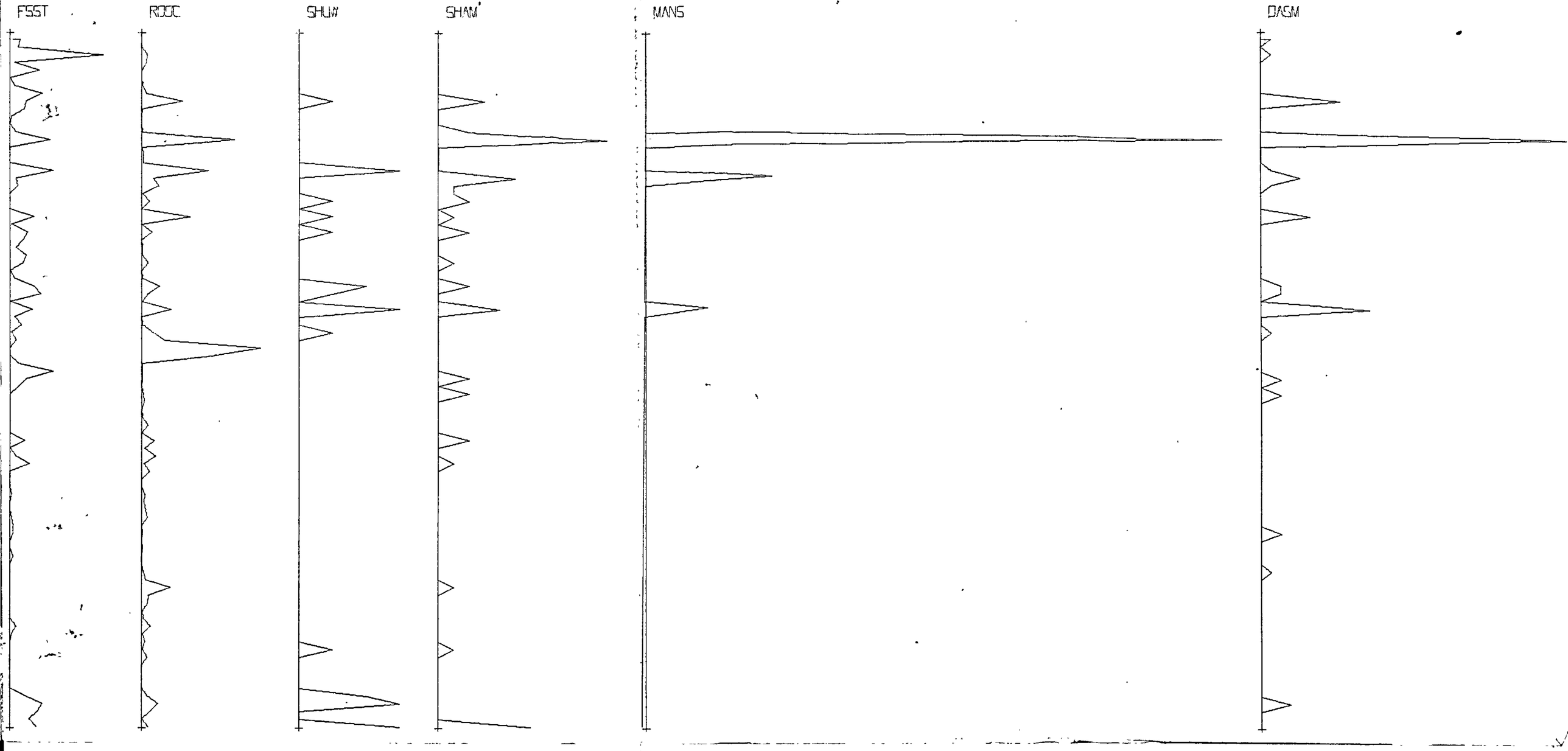

FSST
ROOC
SHUW
SHAW
MANS
DASM

Figure 10.5 New Suburbs

Key:

Kaif - Kaifan

Faih - Faiha

Qadi - Qadisiya

Tons - Total for new suburbs

Hawa - Hawalli

Sali - Salimiya

Towc - Total for whole city

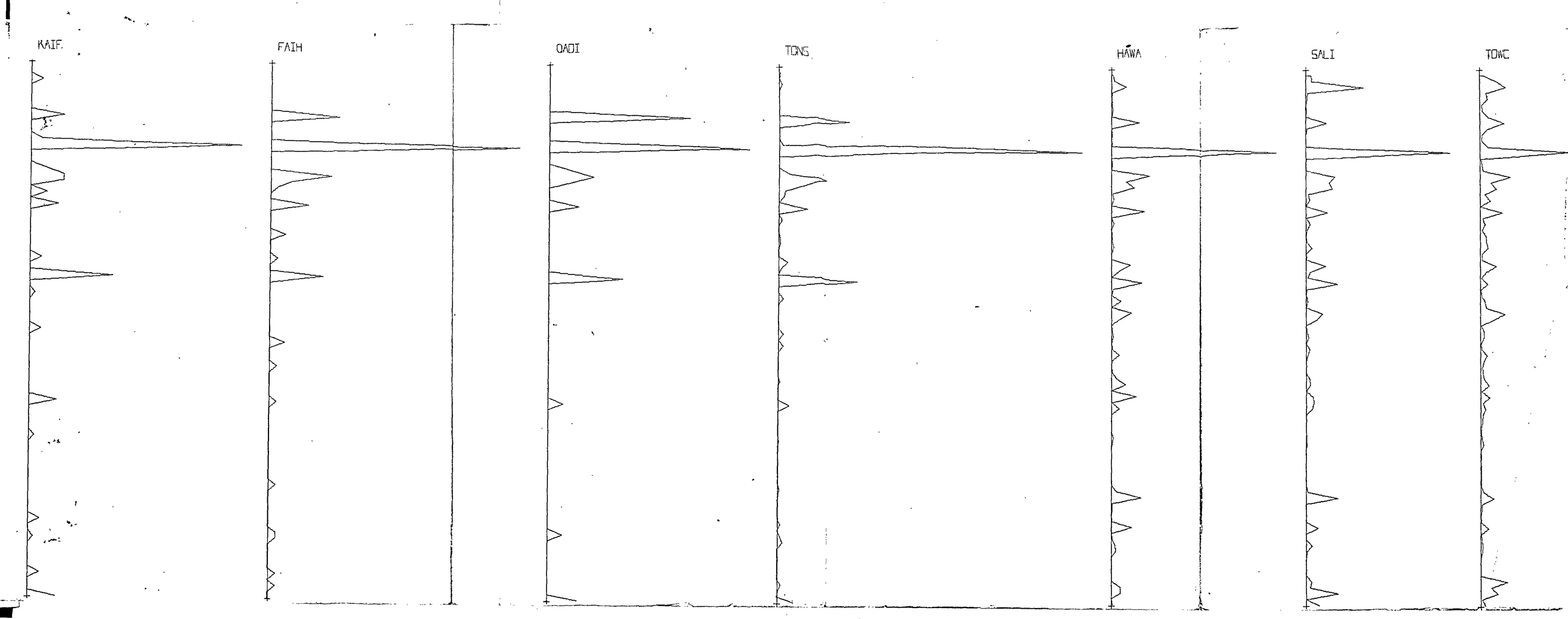

KAIF
FAIH
QADI
TONS
HAWA
SALI
TOWC

Figure 10.6 Outlying Centres

Key:

Abru - Abruq Khaitan

Ahma - Ahmadi

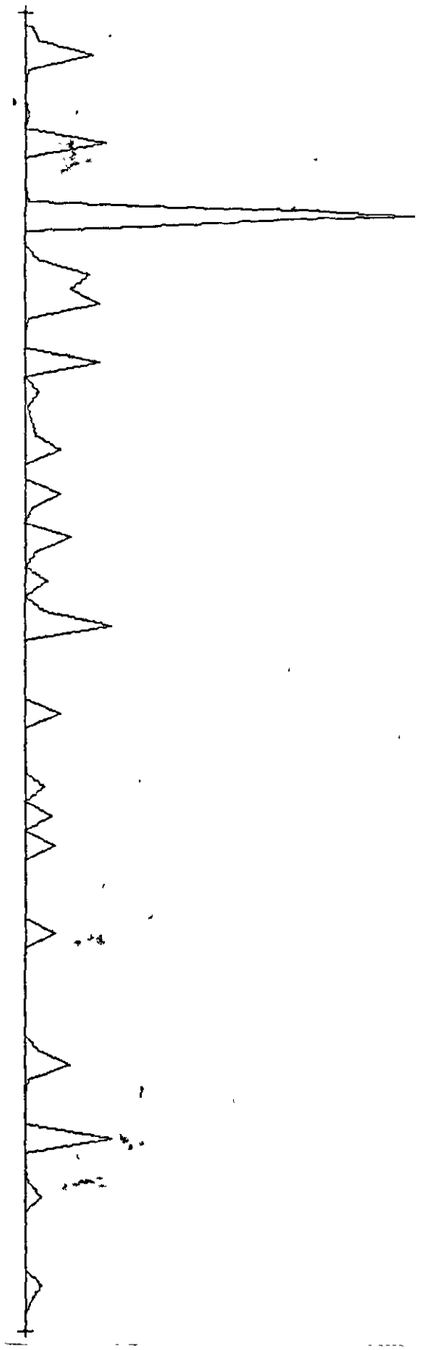
Faha - Fahahil

Farw - Farwaniya

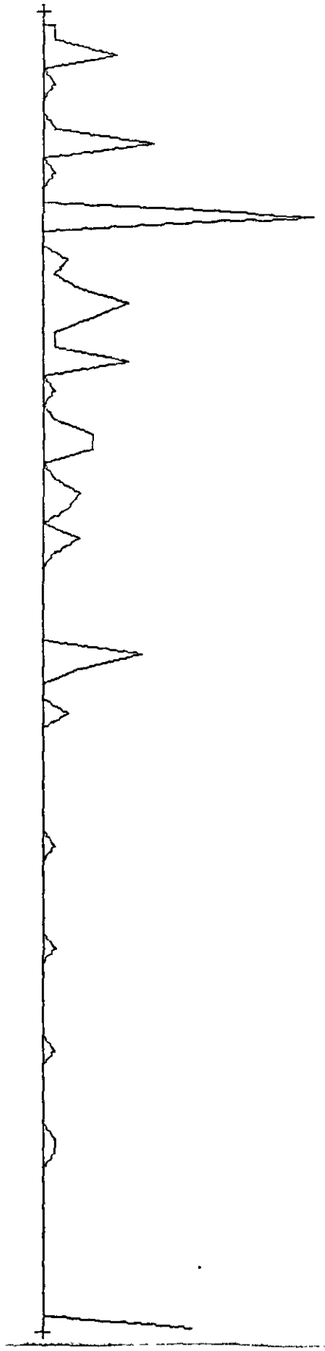
Jahr - Jahra

Shua - Shuaiba

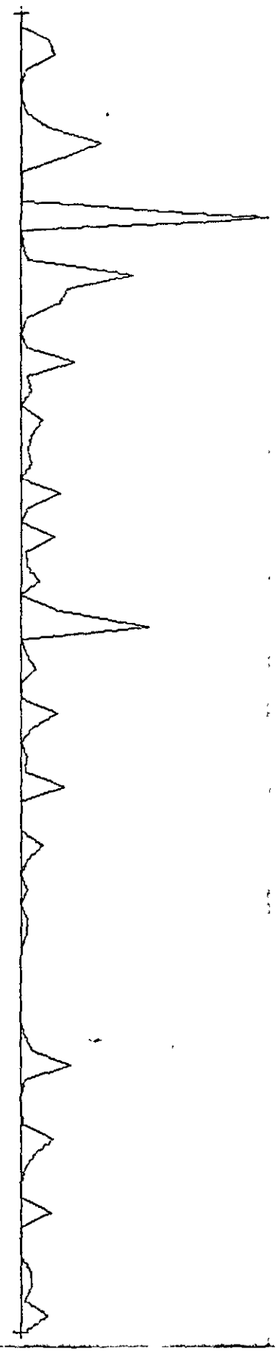
ABRU



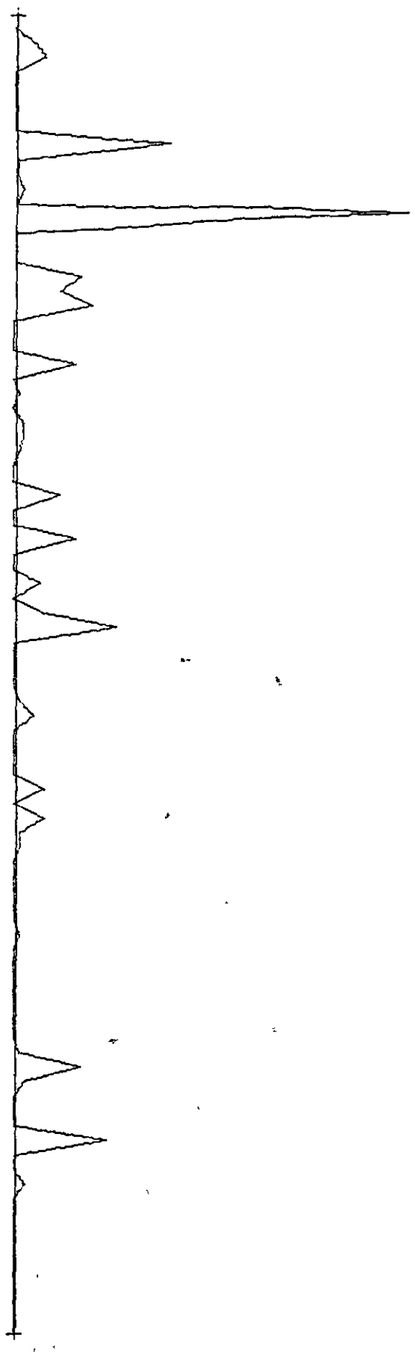
AHMA



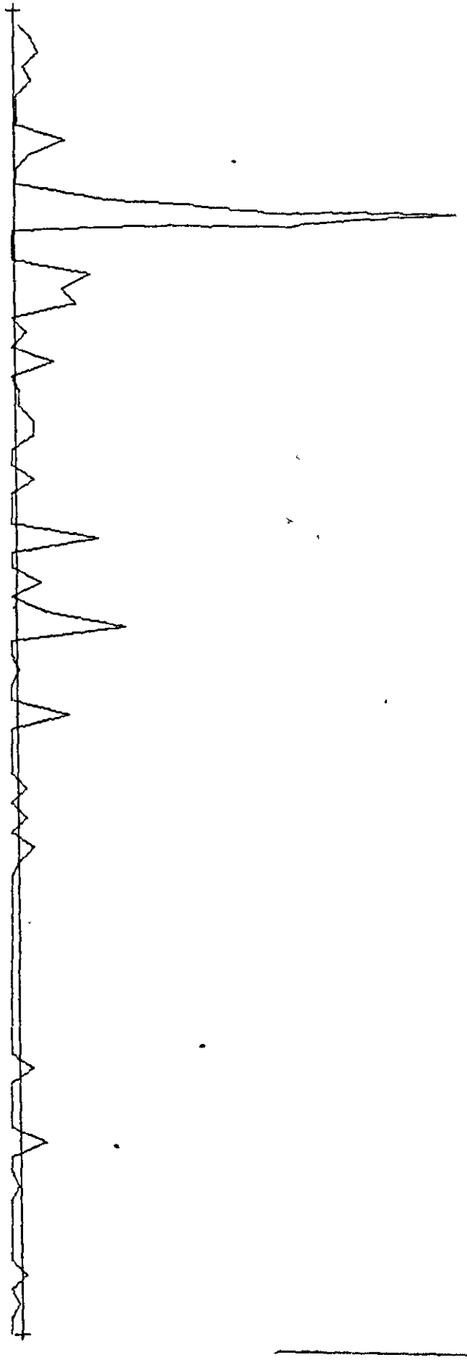
FAHA



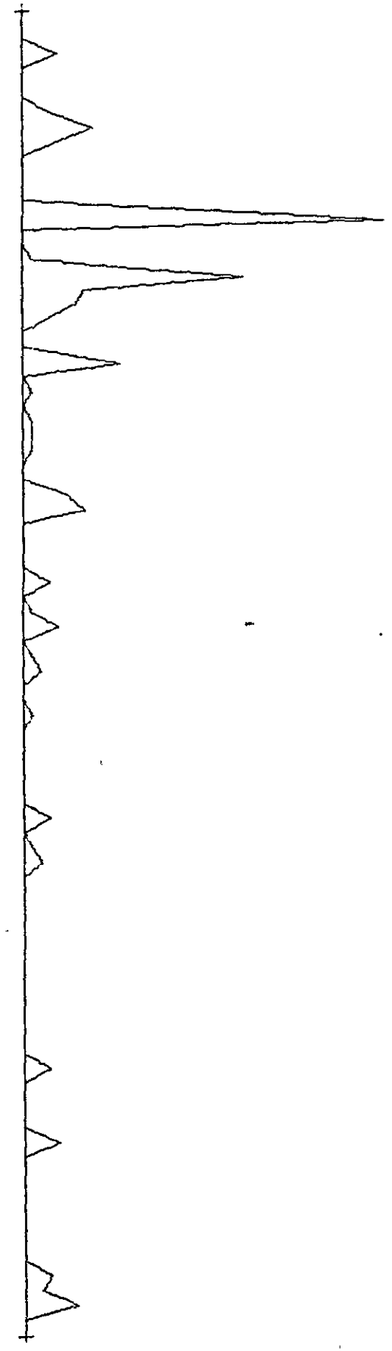
FARW



JAHR



SHUA



Both the Index of Variety and the graphical representations indicate that the Old City has by far the greatest variety of shops in Kuwait. Hawalli and Salimiya in the suburbs stand out as centres of secondary importance to the Old City, but they offer a much greater variety of facilities to the shopper than any of the new suburbs. Fahahil displays the greatest variety amongst the outlying centres, all of which contain more grocery shops than any other shop type.

Grocery, ladies clothing, and hardware shops have been selected as representative of various levels in the hierarchy of shopping centres and their distributions plotted on Figs. 10.7, 10.8, and 10.9 using proportional circles to illustrate the numbers of units recorded in any one centre. These maps confirm the conclusion of the graphs (Figs. 10.3-6) which is that in Kuwait, as in every other example studied so far, local need shops (grocers) are widely scattered while higher order goods (hardware and ladies clothing shops) are more centrally located. It seems then that we have the basis of a conventional hierarchy of service centres in Kuwait.

IV. CONFIRMATION OF THE HIERARCHY

There are three basic constituents of a hierarchy of service centres in any context : the total number of functional units (shops); the number of business types (variety of shops); and the population of a centre in which these elements are located.

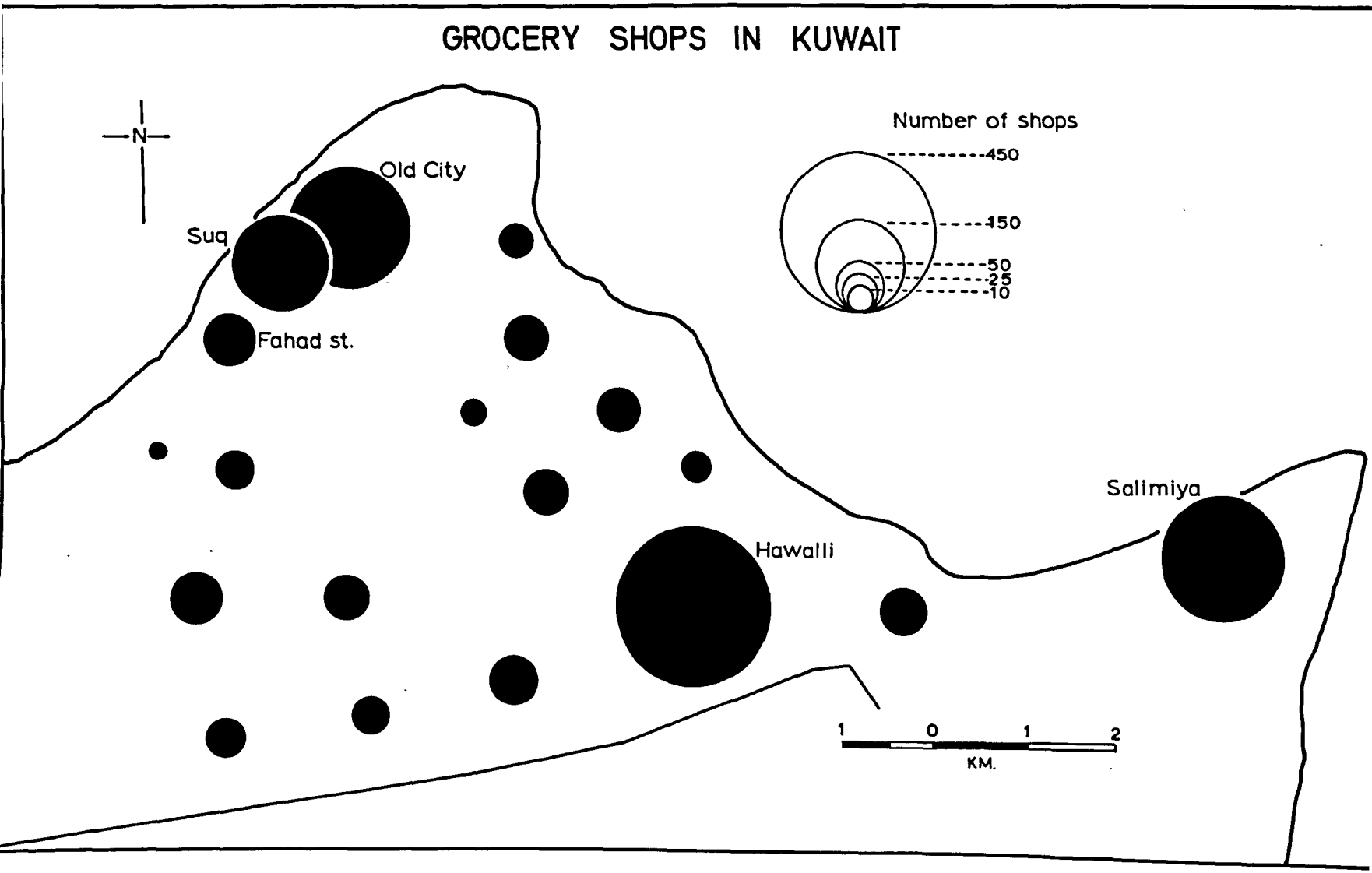


Figure 10.7a : Kuwait City

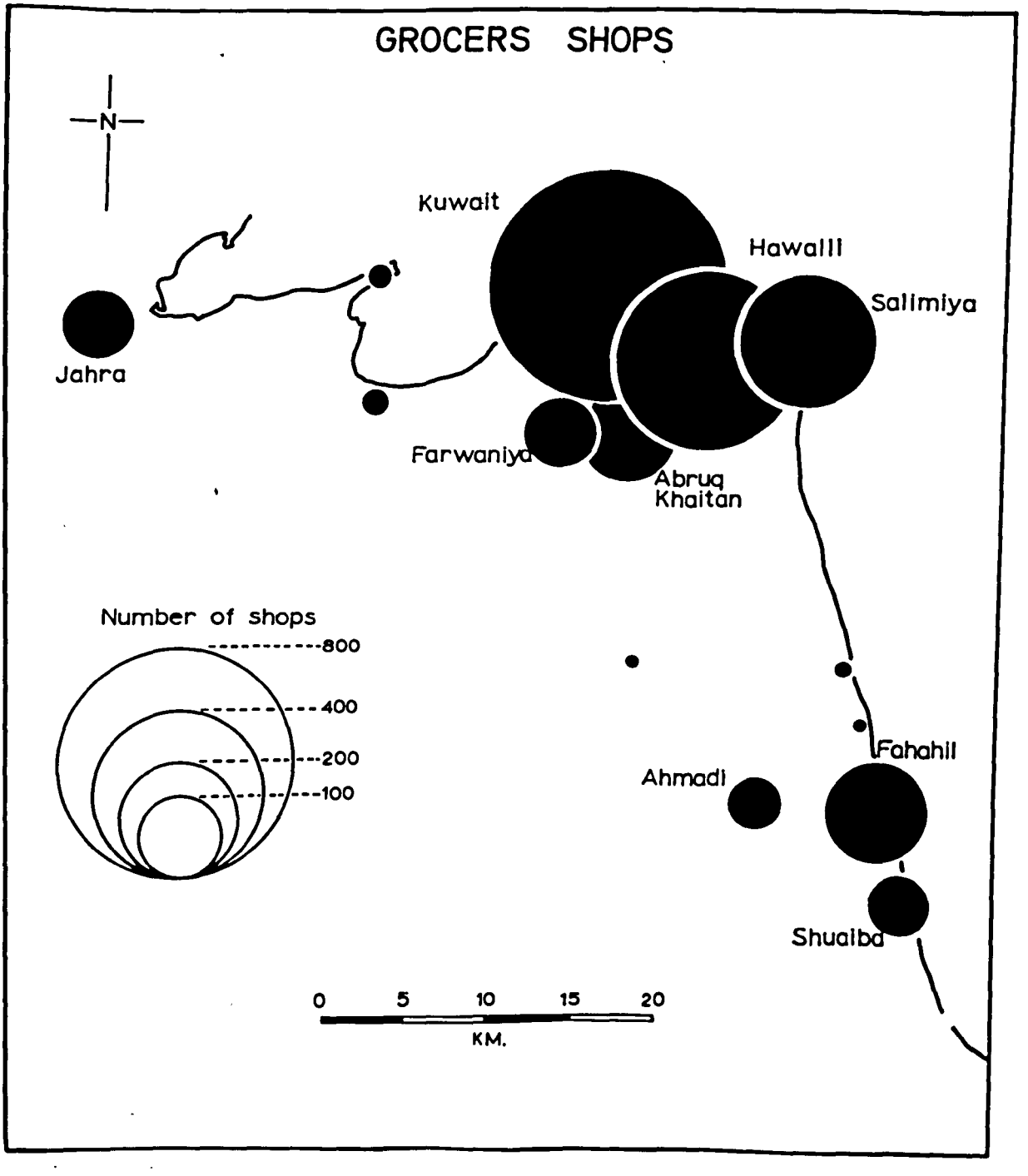


Figure 10.7b : Kuwait State

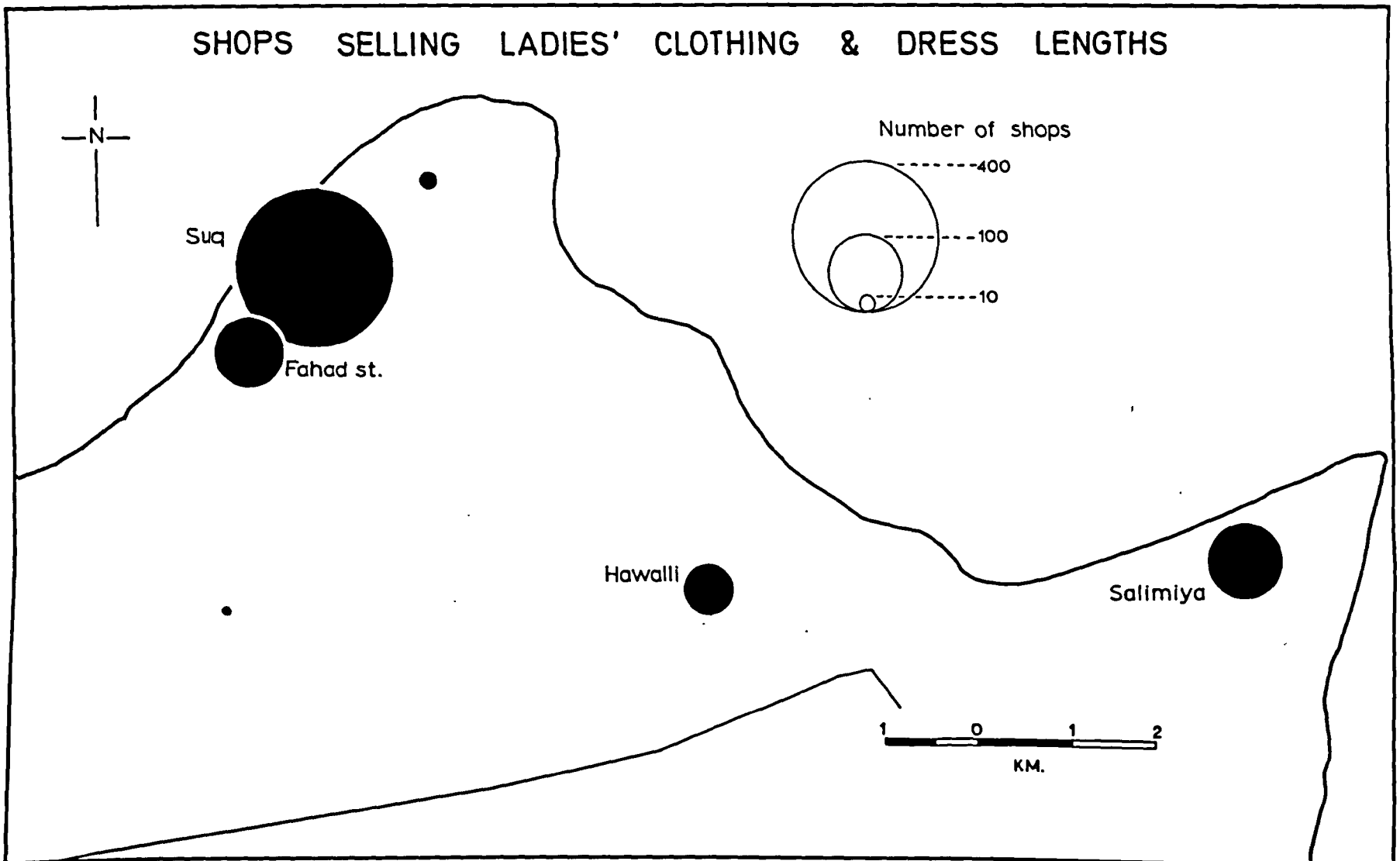

SHOPS SELLING LADIES' CLOTHING & DRESS LENGTHS
N
Number of shops
400
100
10
Suq
Fahad st.
Hawalli
Salimiya
1 0 1 2
KM.

Figure 10.8

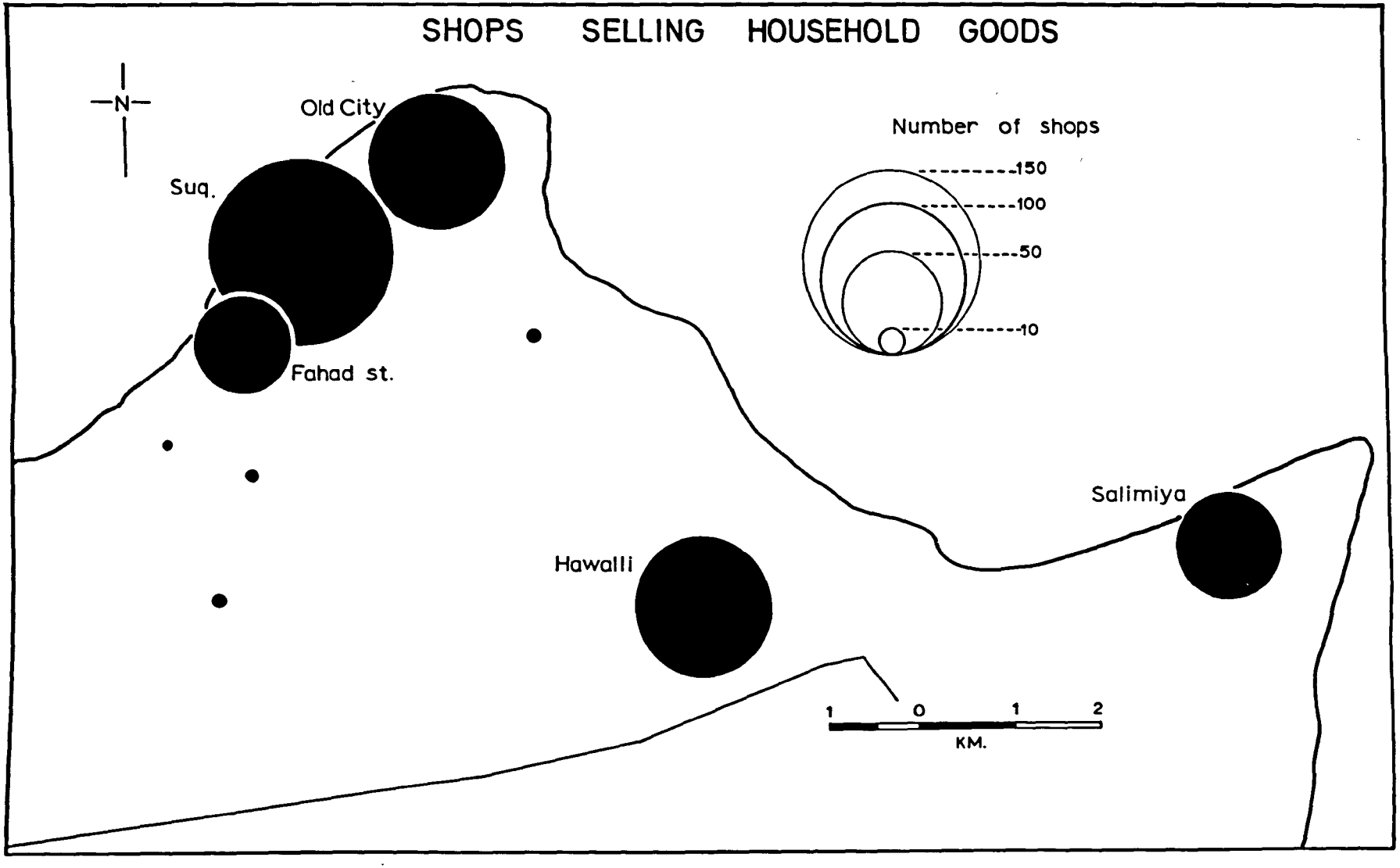

SHOPS SELLING HOUSEHOLD GOODS
N
Old City
Suq.
Fahad st.
Hawalli
Salimiya
Number of shops
150
100
50
10
1 0 1 2
KM.

Figure 10.9

Studies in Western contexts have produced well-established relationships between all three variables (Berry 1967, Chapter 2), but there are few studies of these relationships available for non-Western areas.

Using statistics on the number and variety of shops derived from the field survey and population data drawn from the Census of 1965, all three variables are plotted against one another in Figs. 10.10 to 10.12. Despite the many peculiarities of the Kuwait situation which have been considered in detail in previous Chapters, it is clear from the graphs that in general we have a positive confirmation of the applicability of Western theories on central places to an Oriental situation. This major research finding should provoke other workers to test other similar Oriental statistics against these Occidental models.

As well as this general discovery, the graphs have several other important but more detailed implications. Fig.10.10 showing functional units plotted against central functions on semi-logarithmic graph paper indicates a procession of centres from the Old City through to the new neighbourhood suburbs. The almost linear form of the graph suggests a possible rank-ordering of service centres in Kuwait. At least three levels are recognizable :

i) the Old City

ii) a group of 5 "towns" from Hawalli to Farwaniya

iii) all other centres ("villages")

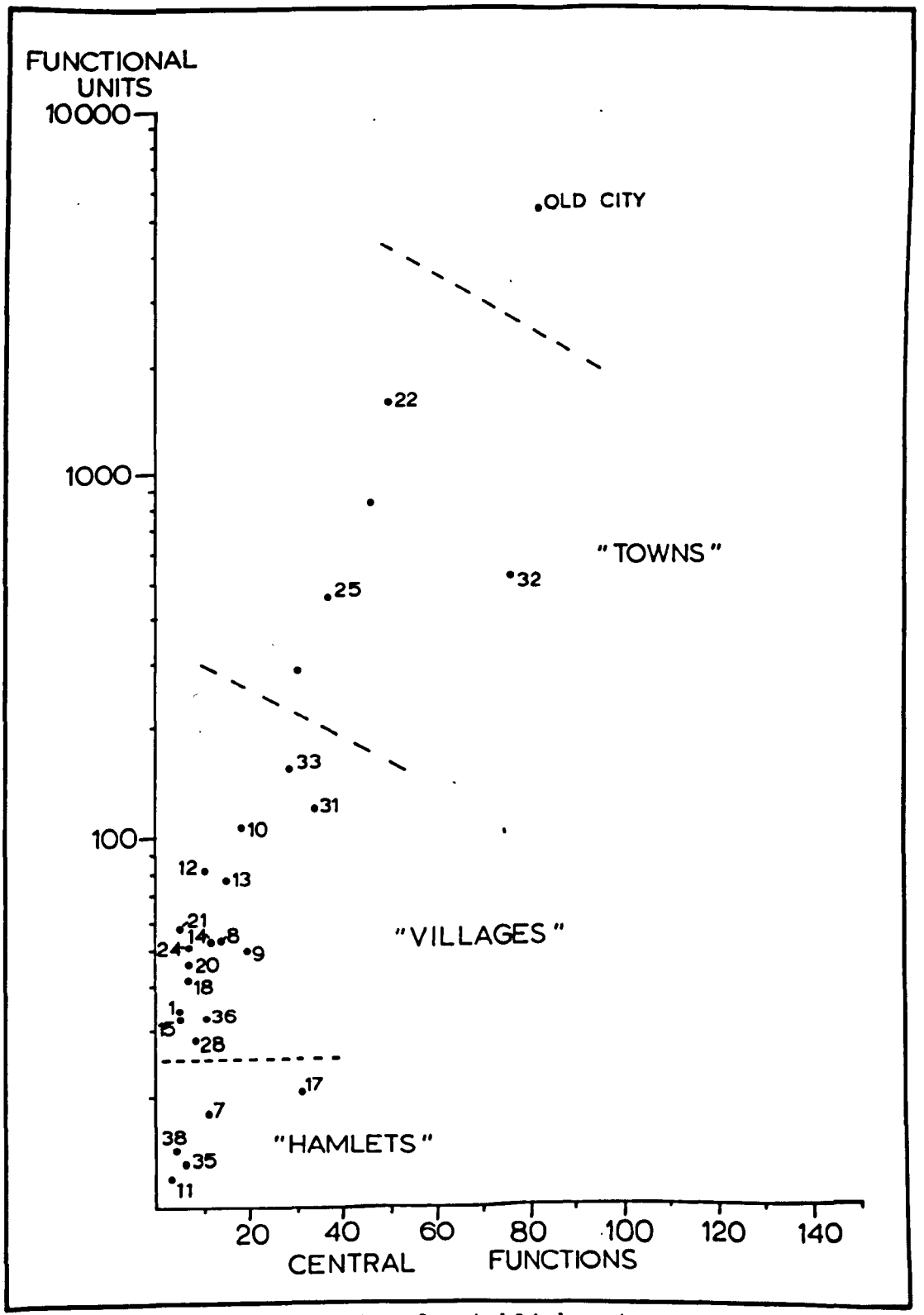


Figure 10.10 Relationship of establishments to central functions.

Possibly a fourth level might be recognized containing centres with less than 25 central functions ("hamlets"). Interestingly, Fahahil proves to be the only major exception to this linear relationship between central functions and functional units. One explanation for this anomaly is that weekend shoppers often visit Fahahil for its range of shops selling Oriental bric a brac, thus sustaining a greater variety of shops in the town than would otherwise be expected.

When centre populations are plotted against the total number of establishments on double-logarithmic graph paper (Fig.10.11), the result is a less clear-cut relationship than expected. Possibly the reason for this deviation is that the only measure of central population available was the Census of 1965 - three years older than the researcher's own establishment survey. Confirmation of this explanation is provided by a consideration of the centres whose deviation from the expected distribution is most marked. The centres are Farwaniya, Fahahil, Abruq Khaitan, Salimiya, and Hawalli, which, as Chapter 9 has shown, are areas of predominantly non-Kuwaiti settlement. There are just the centres in which we can expect immigrants arriving since the 1965 Census to be concentrated (see Chapter 5 for figures).

Finally, in Fig.10.12 the range of business types is plotted against centre population on semi-logarithmic graph paper. The hierarchy of centres suggested by the previous graphs is confirmed, indicating that the threefold division of centres

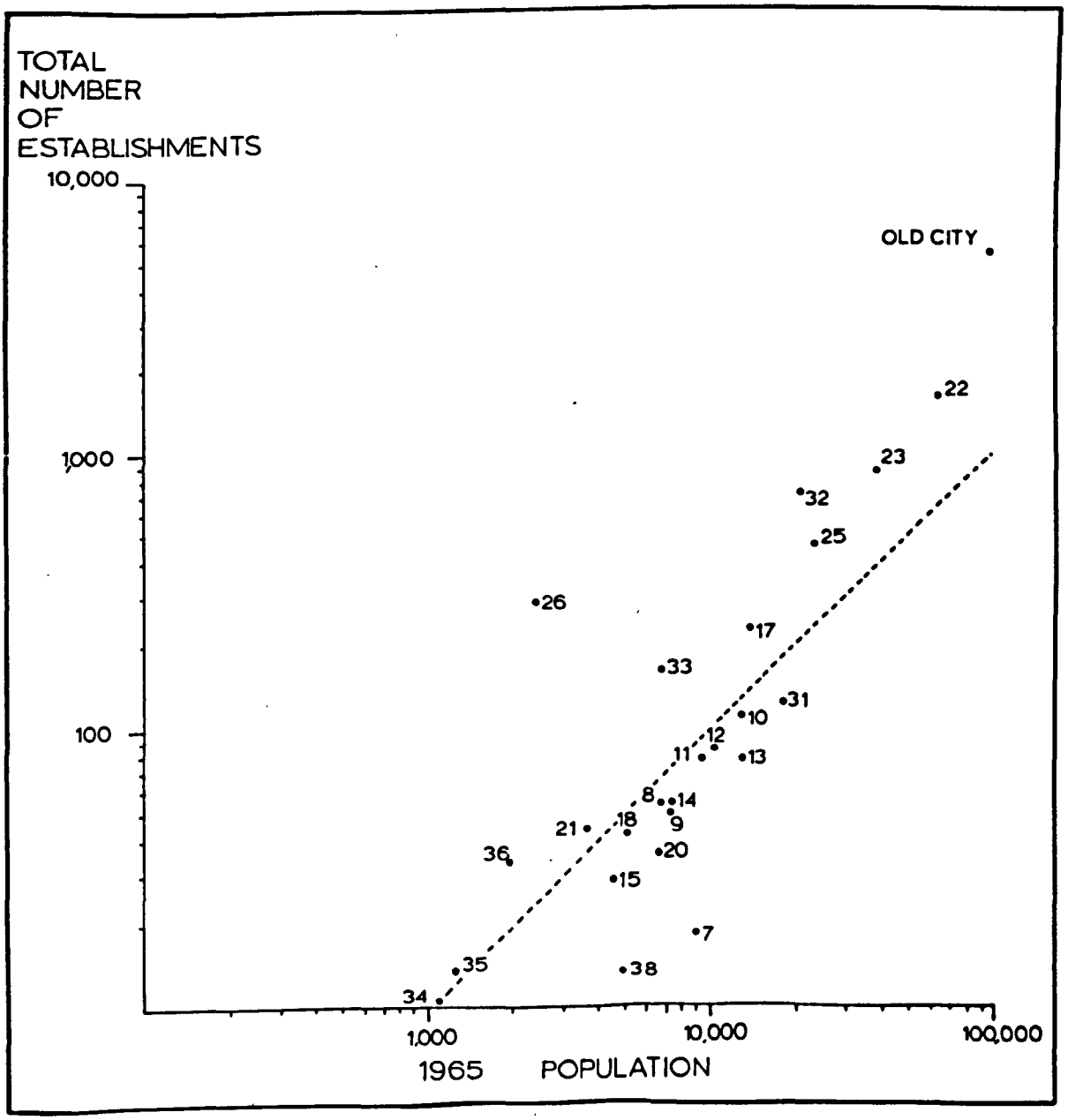


Figure 10.11 Relationship of establishments to centre populations.

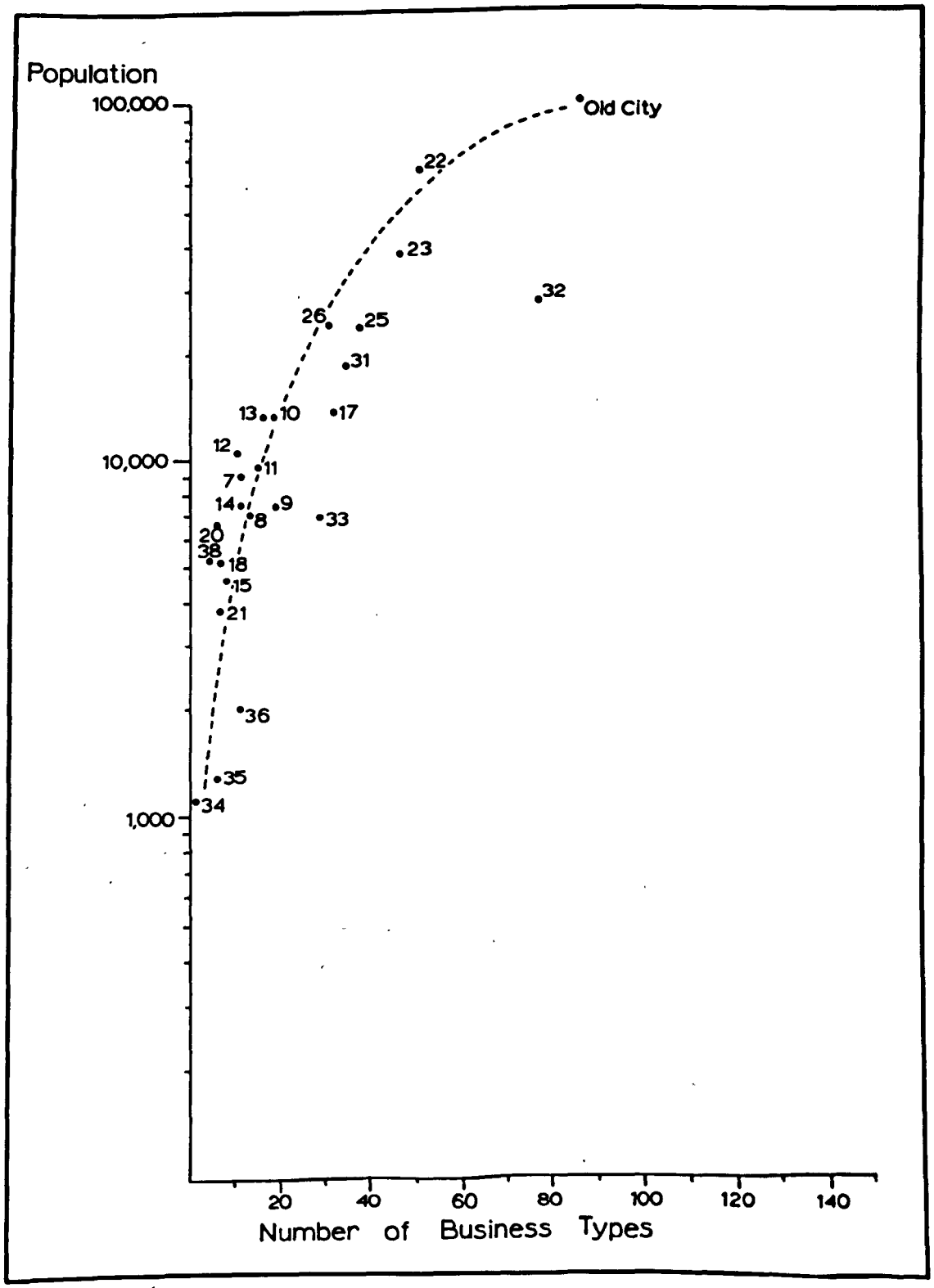


Figure 10.12 Relationship of business types to centre populations.

listed above may have a general validity. In addition, all 3 graphs provide a useful confirmation of the overall accuracy of the field surveys, for if the original data were faulty, no such linear relationships would appear. Particularly, the study proves the utility of the specially designed classification of shop types which was evolved and applied by the researcher (Table 10.1).

In conclusion, this survey of the number and variety of service establishments in Kuwait points to distance as a cogent factor in determining the threshold and range of shopping centres throughout the State. This is encouraging since it is distance which underpins the whole arrangement of centres in hierarchies and broader functional systems.

V. LAND VALUES

a) Problems

In normal circumstances, land values can be used as a measure of the centrality of a service centre since in a free market it is assumed that traders will compete for the commercial site with access to most potential customers, i.e. the most central location within a city or similar centre. On these grounds Murphy & Vance (1954) used land values as one method of delimiting the central business districts of American cities.

In Kuwait, land values are not as useful as elsewhere in this respect for a variety of special reasons. First, land values have been deliberately inflated by the Government's programme

of property acquisition. As Chapter 7 showed, this scheme has primarily affected most of the Old City, although repercussions of the scheme have also been felt in the suburbs. Hence, absolute prices for property throughout Kuwait's urban area are of little direct significance in the definition of the centrality of selected centres. Instead, relative land values for a period of years have been calculated and expressed in map form (Figs. 7.5-7).

It should be added that the ban on the ownership of land and property by non-Kuwaitis has a depressing effect on the frequency with which property changes hands. Thus, apart from the property prices paid by the State, there are few other records of property sales on which to base studies of land values.

b) Land Values and Centrality

As Chapter 7 described, no distinction between residential and commercial property was drawn in the Government property acquisition scheme. Hence, we can use the sample of property prices extracted from the Municipal records and presented as Appendix 2 in the current study of property values.

Clearly, the Old City is by far the highest priced area in Kuwait. As Fig. 7.7 shows, the west end of the city - the suq, together with Fahad as-Salim Street - was between 1962 and 1966 valued at rates well above those for any other district in the State. Hence, on the criteria laid down by Murphy & Vance (1954) we can place Kuwait's "central business district"

within these two areas. Unfortunately, land values in Kuwait for the reasons mentioned above can provide no more specific guide to centrality apart from indicating the commercial supremacy of the city's west end.

VI. RENTS AND KEY-MONEY

a) Methods

Key-money (Qufl or Quflia) is the sum of money paid by a new rentier to the outgoing tenant of a shop for the previous owner's shop fittings and improvements and for the accumulated "good-will". It is common in most Middle Eastern countries and with rents can be used as a measure of the centrality of a given site.

A field survey was designed to gather statistics on both rents and key-money throughout the State of Kuwait. A sample of 100 shop proprietors were visited and questioned about the rents and key-money which they were currently paying for their premises. In certain circumstances it was necessary to pose as a prospective proprietor to extract this information. In every case the figures provided were corroborated by a second merchant with some knowledge of the property of the original informant.

As far as possible the sample included most of the commercial centres in the State. Individual shops were carefully

selected since it later transpired that the profit or mark-up on different ranges of goods varied widely and that this had a bearing on the value both of rents and key-money. Results of the survey are presented as Appendix 3.

b) Results

Again, results of the field investigation revealed that rents and key-money in Kuwait are not an infallible guide to the retail structure of the city or urban areas beyond. Among the factors responsible for this exceptionalism we can list the following :

i) In several instances in the suq the Municipality was the major landlord. This body had not increased the rents of its stalls since the early 1950s despite the prosperity of the suq as a whole.

ii) On the periphery of the suq the Municipality were building several new "Commercial Centres" - parades of shops and offices facing inwards on an enclosed pavement (Plate 10.1). The rents in these centres were fixed by the Municipality.

iii) Finally, rents and key-money paid in the new suburban co-operative centres (see below) bear little relation to the going rates in the open market.

Clarke & Clark (1969) working in Iran found key-money there to be "an extremely sensitive measure of the commercial potential of a given locality". This was not found applicable

Plate 10.1 A new commercial centre : Tower of Saif Palace in left centre.

Plate 10.2 View of the Old Suq from Safat Square.

in Kuwait; numerous specific factors affected the sum of money paid, and only by gross generalization could any such relationship be discovered. Key-money has no tax significance in Kuwait and its values are thus susceptible to influence by the year of the change of tenancy, by the type of goods sold, by the quality of the premises, and by "micro-location" - whether the shop had a centre block or corner location.

Broadly, the Old City is far and away the most expensive location for a shop. Specifically, the area with the highest average rental is New Street (or "Pillars Street") at K.D. 129 per door. Mubarakia, not far away, is strongly sought after, as the high key-money statistics suggest - on average K.D. 18,000 per door; compared with only K.D. 4,666 per door in New Street. Much of the discrepancy between key-money and rental payments can be explained by the type of goods sold. Mubarakia is the premier women's clothing centre in Kuwait; profits are high on this range of goods, and traders vie with each other to obtain a shop in this choice area. By comparison, while New Street has a high turnover of goods, shops selling radios, watches, and cameras (New Street's specialities) can be hired elsewhere with only a slight fall-off in profitability.

In the central suq (Plates 10.2, 10.3, and 10.4) rents are low because the Municipality owns many of the stalls

Plate 10.3 The Cloth Market in the Suq.

Plate 10.4 The Vegetable Market in the Suq.

and has maintained the charges at levels which prevailed in the early 1950s. Clearly, competition for these cheap stalls and shops is fierce (key-money averages K.D. 17,500 per door) since their central location brings many potential customers past their doors (see below). The same applies to Suq al-Duaij at present in process of demolition.

Interestingly, rents in Fahad Street on average are almost exactly the rates charged in the suq (K.D. 102 per door for shop numbers 1-15 and K.D. 104 per door for shops 50-72 (Appendix 3). Key-money, at K.D. 5,750 per door, is only one-third as much as the rates prevailing in Aziz Street and Mubarakia in the suq. Evidently new shops in Fahad Street are not so much in demand as smaller shops in the suq despite almost equal rents. Part of the explanation is the line of goods sold, for Fahad Street specializes in "modern" goods - made-up dresses, electrical goods, and men's suiting from Britain - which restrict the scope of a trader's clientele. In addition, many of the shops in Fahad Street were considered by merchants in the suq to be too large.

In the new commercial blocks which the Government has built in parts of the old suq, a shop with an office above and a basement beneath (Plate 10.1) costs a standard rate of K.D. 225 per month. Key-money does not arise since the shops are new, but many traders thought that rents were too high in view

of the relative unpopularity of the new centres with shoppers when compared to the suq (see below).

Beyond the suq and Fahad Street rents were on average less than half the rates prevailing in the Old City. Salimiya's main street is rapidly developing as a fashionable shopping parade specializing in ladies' clothing and rivalling Fahad Street in its range of goods and the source of its clientele. Rents averaged K.D. 69 per door - just over half that in Fahad Street - with key-money at similarly diminuted levels. Rents and key-money elsewhere are tiny fractions of the rates paid in the central commercial zone of the Old City (see Appendix 3).

Despite the regularities in the size and spacing of service centres and the "normalities" in the commercial structure of the urban areas which the foregoing field survey has brought to light, it is impossible to ignore the many special attributes of the Oriental system of retailing. These peculiarities require particular attention before progressing to a detailed study of consumer movement in the subsequent Chapter.

VII. SPECIAL ATTRIBUTES OF SHOPS AND SERVICE ESTABLISHMENTS IN KUWAIT

Several peculiarities of shops in Kuwait are listed below :

i) Shops in Kuwait are generally smaller than their European equivalents. The average size of a shop front is not more than

3 m. and several shops in the suq - particularly perfumers - were less than 1 m. wide. Statistics on floor areas are lacking but many of the small shops in the suq had no storage place, thus amounting to no more than covered stalls. Plates 10.2, 10.3, and 10.4 illustrate the form of these shops.

ii) Very few of the retailing establishments in Kuwait have more than one shopkeeper. As indicated above, the Government Establishment Census identified 11,257 retailing establishments employing only 12,116 workers.

iii) Several establishments recognized and classified in the field survey are unknown in the West. For example, the researcher noted several establishments in the suq making and selling traditional cloaks Bushut; nearby, several shops were selling rifles, tent poles, headcloths, tent material, and other Badu requisites. Other shops are special forms of shops whose products are known in the West. For example, perfumers in Kuwait sold not only conventional scents, but also rose-wood and other fragrant wood and herbs. Other details can be found in Table 10.1.

iv) Within Kuwait there are stronger contrasts in shop type than in most Western cities. While Kuwait still possesses an old suq containing rows of small closely packed stalls in narrow twisting alleys, not 300 m. away there are modern, air-conditioned self-service supermarkets. This can be confirmed by comparing Plates 10.3 and 10.4 with Plate 7.11.

v) There are few owner-operated shops in Kuwait as Kuwaitis, the land-owners, employ non-Kuwaitis to act as managers on their behalf.

vi) While fixed prices prevail in the newer shops, as in the West, in the suq and other older areas customers usually have to haggle with shop proprietors.

vii) Shopping hours are very different from those in Europe. The working day in most businesses finishes about mid-day; after a rest in the heat of the early afternoon shops open in the late afternoon until about 8 p.m. for the main shopping period. These hours are earlier during summer and later during Ramadhan.

viii) A notable characteristic of shops in the suq is for groups of shops selling almost the same range of products to cluster together. This clustering is a feature of many Middle Eastern bazaars (e.g. in Iran, Beirut, Doha, and Dubai). In Kuwait, these clusters of similar shops are collectively known by the name of their principal product. For example, the collection of stalls selling arms is known as Suq as-Silah, the weapon suq; the clothing and cloth market is known as Suq al-Qumash; and the meat market as Suq al-Laham. Part of the vegetable and fruit market (Suq al-Khdar) is shown in Plate 10.4.

ix) Finally, the ratio of the total number of shops in the State to the total population differs from that in Europe. An average of between 100 and 150 persons per shop is generally

accepted by planners in this country at present. In 1965 in Great Britain as a whole, the Census of Distribution showed the ratio to be 83 persons per shop. In Kuwait, the ratio is much lower; using the 1965 population, there were only 41 persons per shop. By applying the population estimate of 692,000 for January 1968 (Chapter 5), the ratio becomes 63 persons per shop in Kuwait. The small size of many shops and their high profitability may be the factors responsible for this difference between the ratios for Britain and Kuwait. Further implications of this difference are dealt with below.

Following this Chapter's consideration of the distribution, type, and special characteristics of shops and service establishments in Kuwait, we can now move on to consider the use of these facilities in Chapter 11.

CHAPTER ELEVEN

CENTRAL PLACES AND THEIR RELATIONSHIPS :

II. CONSUMER BEHAVIOUR AND SHOPPING MOVEMENTS

Introduction

In many ways the study of consumer movements is the most important aspect of any study of service provision. No previous studies had been carried out in Kuwait on any aspect of shoppers' movements. Thus a detailed field investigation was necessary to provide answers to such questions as to how frequently various groups shop for certain goods; where these groups shop for such goods; and who does most of the family shopping in Kuwait. Special difficulties were involved in the collection of information such as this. These difficulties will be outlined together with a description of the course of the survey before proceeding to a study of the survey's results.

I.

a) Field Study

Several methods of obtaining a representative sample of shoppers in Kuwait were considered. First, a house to house survey of households in specific localities was attempted. This proved unsuccessful on several grounds. Many individuals resented the researcher's enquiries on principle, while others required time to think over the answers to the questions posed.

Language too proved a difficult obstacle to surmount.

As an alternative, selected shopkeepers were approached and their advice sought on the source areas of their customers. Some of the customers were questioned about their shopping behaviour but again reactions were generally hostile.

Since both these methods proved unworkable, a questionnaire was evolved and duplicated in English. It was tested initially on a British women's club who kindly offered to co-operate. Unfortunately, the questionnaire proved unsatisfactory for two reasons. It was too detailed for most women to answer quickly - interest waned rapidly if the questionnaire took longer than 10 minutes to complete. Secondly, interviewees resented revealing information on household income or expenditure. Income is a confusing variable to isolate in Kuwait because of the volume of remittances abroad by non-Kuwaitis, together with the common habit of oil companies and similar organizations paying part of their employees' salaries into bank accounts elsewhere.

For these reasons a simplified questionnaire was evolved, tested, and applied (Appendix 4). With copies printed in Arabic and English, the task of circulating the questionnaires began. British, American, and Indian ladies' clubs were most co-operative in Kuwait City, while both the "Johnny Patrick" and the "Yasmeen" clubs in Ahmadi agreed to answer questionnaires.

The kindness of the Kuwait Oil Company in assisting in the latter two cases is gratefully acknowledged. In addition, the Geography students (both men and women) at Kuwait University assisted by taking questionnaires to their parents, their relations, and their friends. Thus, over 500 completed or partially completed questionnaires were obtained over a period of two months early in 1968.

Inevitably the sample was biased by both nationality and income group. Whilst the students at Kuwait University are mostly Kuwaitis (Prospectus 1967, p.191), they are drawn from a wide cross-section of socio-economic groups (Professor Ahmad Abu-Zaid, Professor of Sociology, Kuwait University, personal communcation). Nevertheless the sample favoured the educated or literate classes of society for obvious reasons. Various embassies and consulates were approached (notably the Iranian, the Jordanian, the Egyptian, the Indian, the Pakistani, and the Iraqi) with a view to questioning selected groups of households on their shopping habits. Only the Indian Embassy co-operated in this way and in certain other cases enquiries were greeted with hostility and suspicion. Finally, the problem of obtaining a wider cross-section of respondents proved insoluble in Kuwait, so that the bias has been corrected as well as possible in the processing of the data in Durham.

Table 11.1 NATIONALITY REPRESENTATION IN THE 1965 CENSUS AND IN THE QUESTIONNAIRE STUDY COMPARED

Nationality	Percentage in 1965 Census	Percentage in 1968 Survey
Kuwaiti	47	35
Jordanian	16	9
Lebanese	4	1
Indian	3	13
Pakistani	2	1
Egyptian	2	2
British	1	23
U.S.A.	1	13
Total	76	97

Calculated from : i) Census of Population 1965, Table 2.

ii) Field Survey, 1968.

b) Data Processing

In Durham, the completed questionnaires in English and Arabic were translated onto computer punch-cards. All responses on the questionnaires were first given number codes to facilitate their statistical manipulation. Surprisingly, many respondents were vague about their place of residence since, with the exception of Ahmadi, Post Office boxes are in

use for all mail. In addition, many knew only the name of the shop which they normally used and were ignorant of its geographical location. These difficulties were resolved by the application of a set of number codes which had been specially evolved to describe exactly the location of a house or shop anywhere in the State area.

A tabulation programme was written for the computer allowing the listing of one set of responses against any others. Using the number codes, any information regarding the shopping behaviour of people in any specified residential or national group could be immediately extracted in tabular form. In all, over 200 tables were produced by the computer for analysis.

II. SHOPPING MOVEMENTS

In the questionnaire respondents were asked where they usually shopped for the same three selections of goods mentioned above - groceries, ladies' clothes, and household appliances. Tables listing place of residence against the location of the type of shop in question were produced using a computer. Figs. 11.1-11.6 were constructed from these tables. The device used to illustrate shoppers' movements is the "Desire Line" (Berry 1967, p.10) - a straight line linking the respondent's home with the shop where the purchases are made.

As Figs. 11.1 and 11.2 show, distances travelled to grocery shops are very much shorter than those travelled for

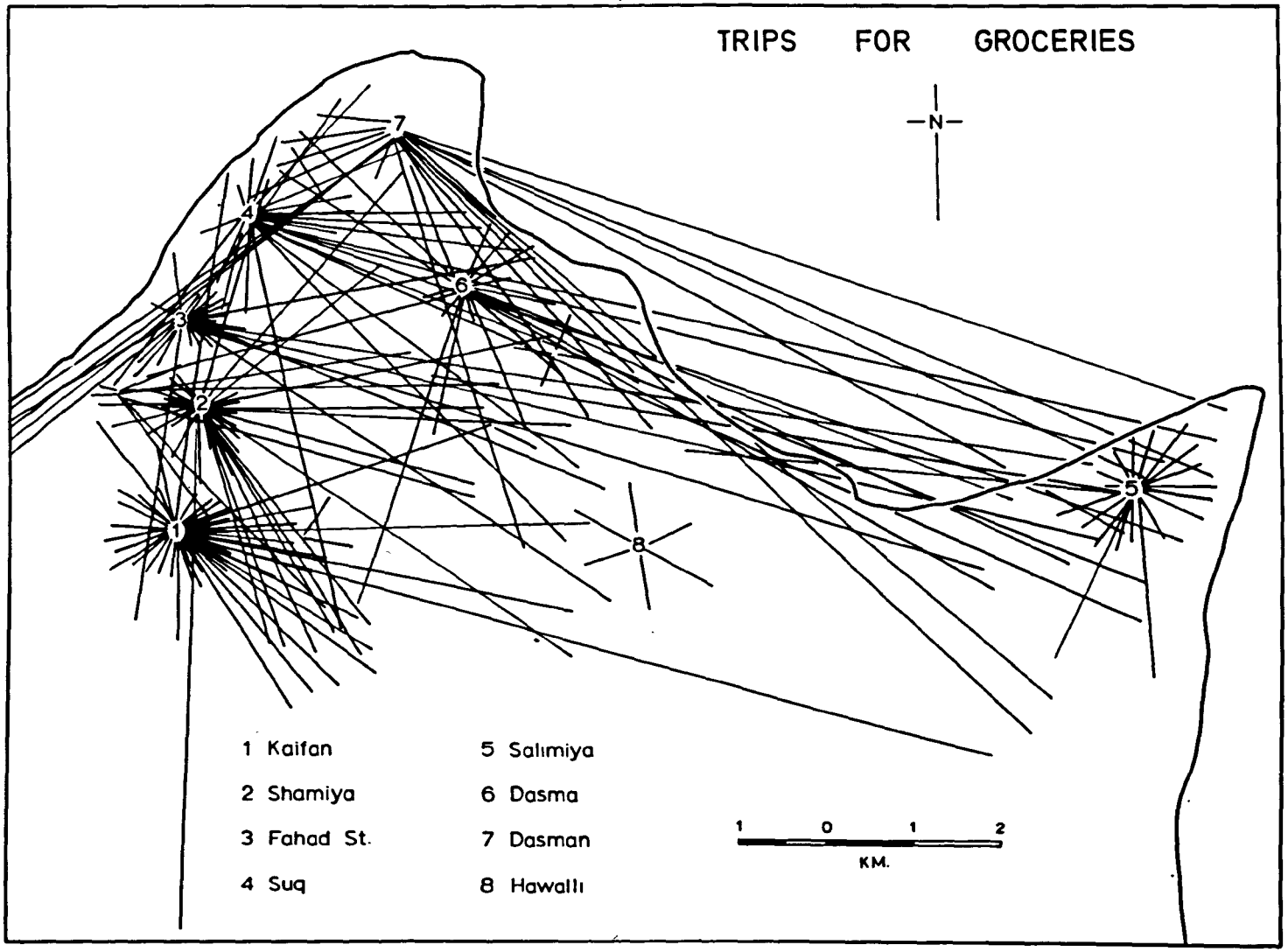


Figure 11.1 Desire lines linking shopping centres and shoppers' homes : Kuwait City.

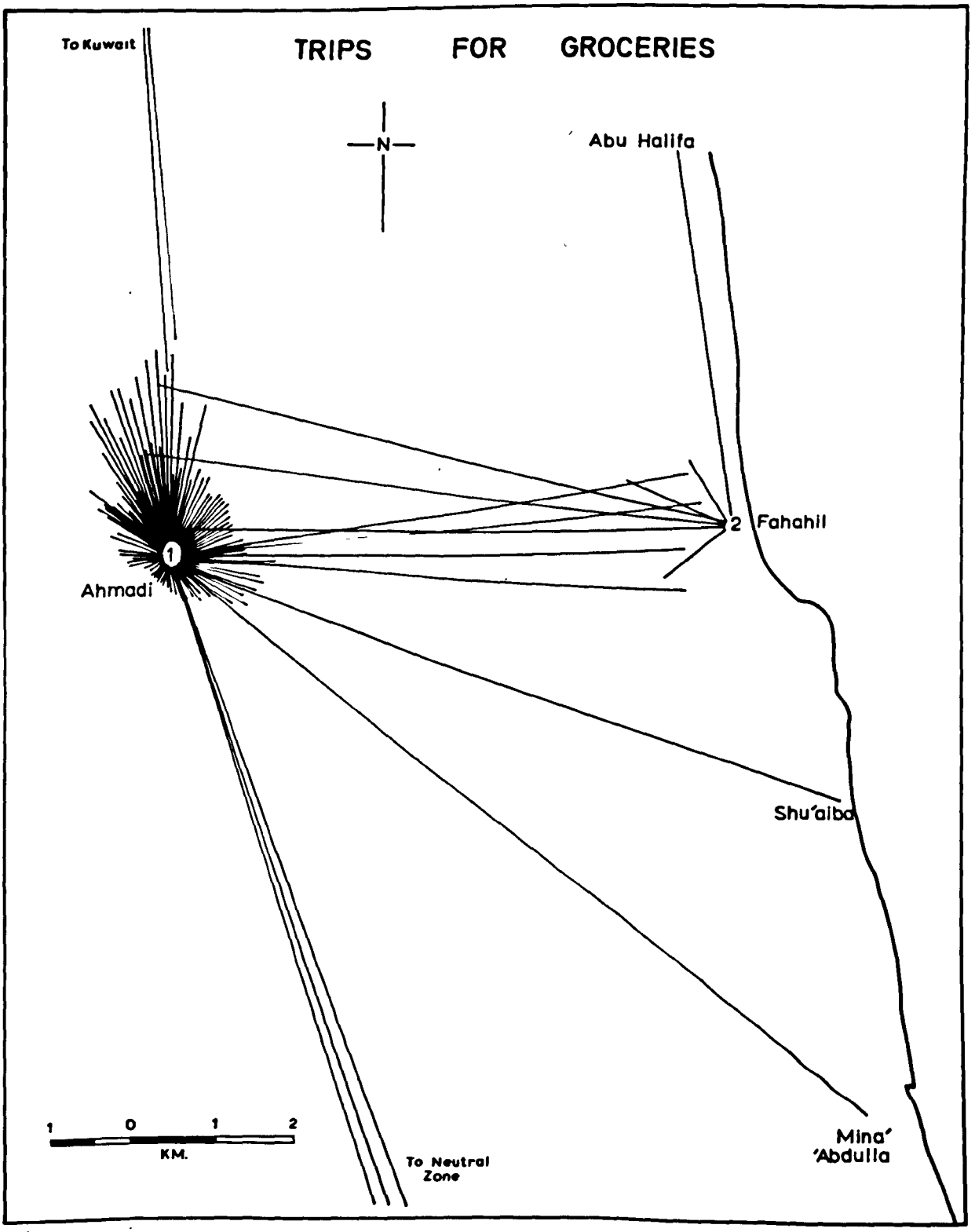


Figure 11.2 Desire lines linking shopping centres and shoppers' homes South Kuwait.

household goods and ladies' clothes. While trips for household goods include visits to several centres, some near and some far from home (Figs.11.3 and 11.4), trips for ladies' clothes concern three major centres - the suq, Fahad Street, and Salimiya - in general well separated from the shopper's home area (Figs. 11.5 and 11.6).

It seems that the questionnaire has identified three levels in the central place hierarchy - low-order centres selling groceries; medium-order centres selling household goods; and finally, high-order centres selling ladies' clothes. Each higher order centre of course sells all the goods and services offered by lower order centres as well as its own extra goods. A comparison of the distribution of these three types of shopping facilities is shown on Figs. 10.7-10.9 using proportional circles; a relationship obviously exists between the length of trip that shoppers are prepared to make and the provision of different types of central services. As the graphs showing the composition of shopping centres suggested at the outset (Figs.10.3-10.6), the provision of shopping and service facilities in Kuwait corresponds with established notions on vested hierarchies and the functional interdigitation of service centres.

These conclusions hold good for the movement data in general. Kuwait, however, consists of a whole range of

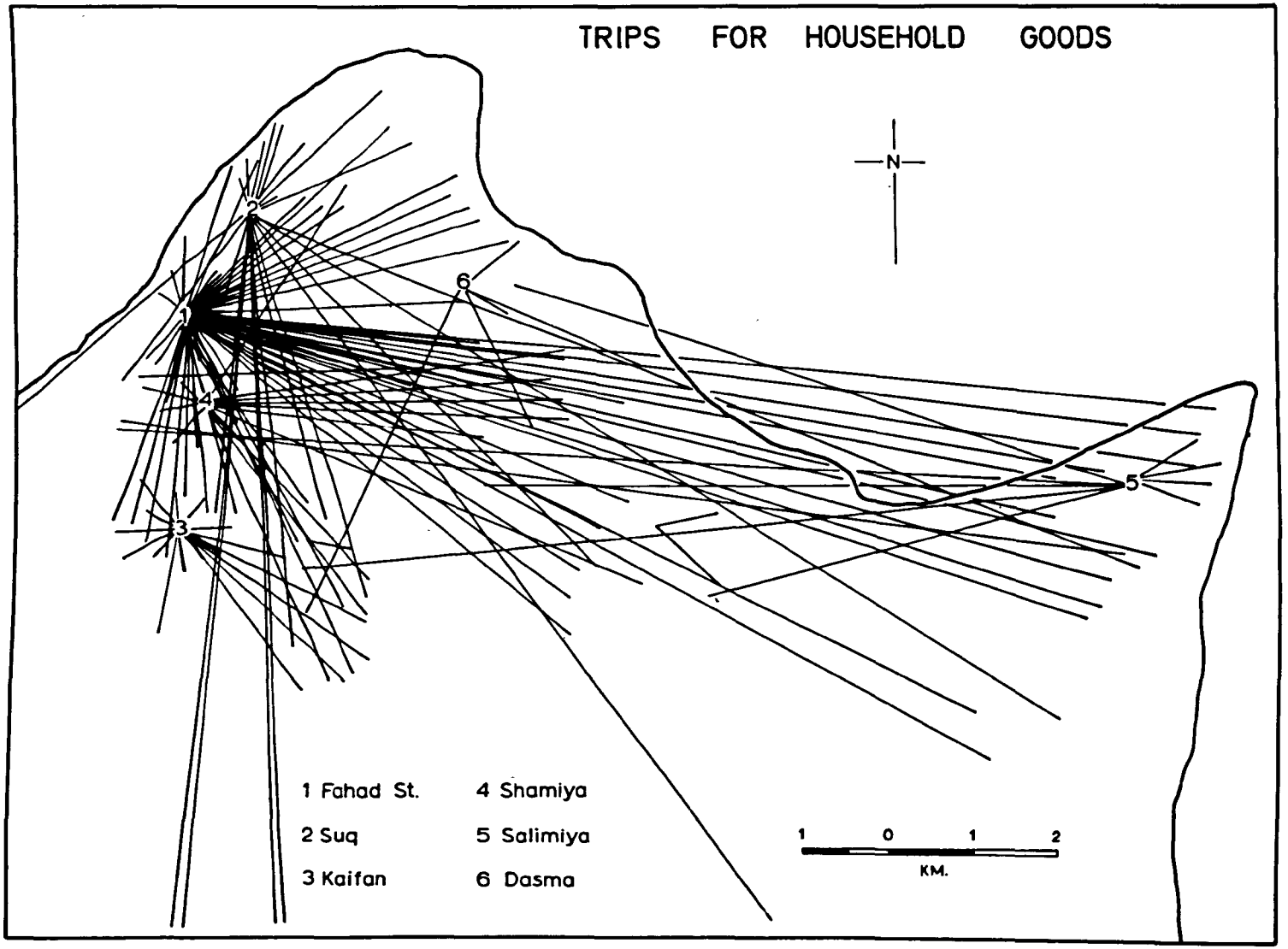


Figure 11.3 Desire lines linking shopping centres and shoppers' Homes : Kuwait City.

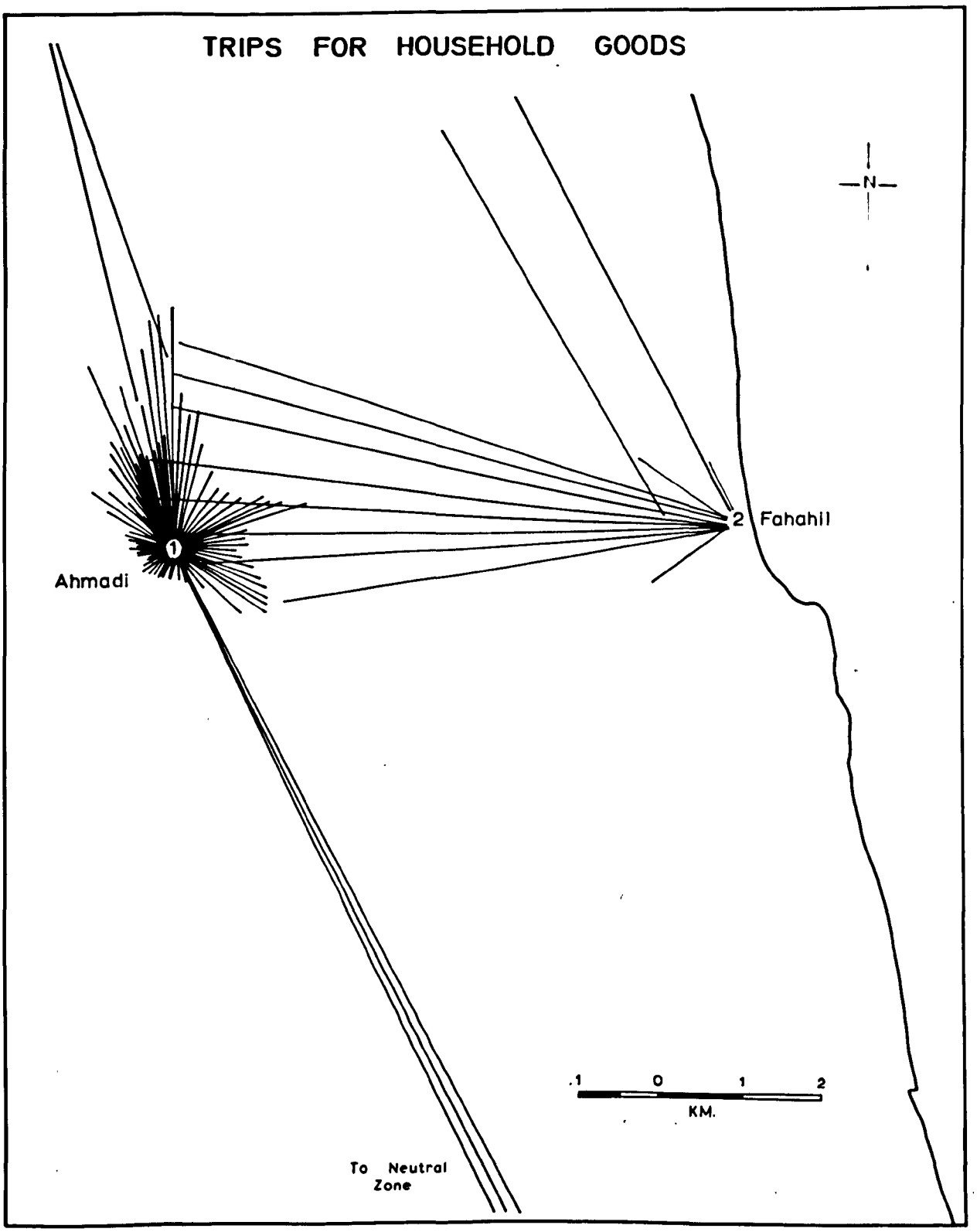


Figure 11.4 Desire lines linking shopping centres and shoppers' homes : south Kuwait.

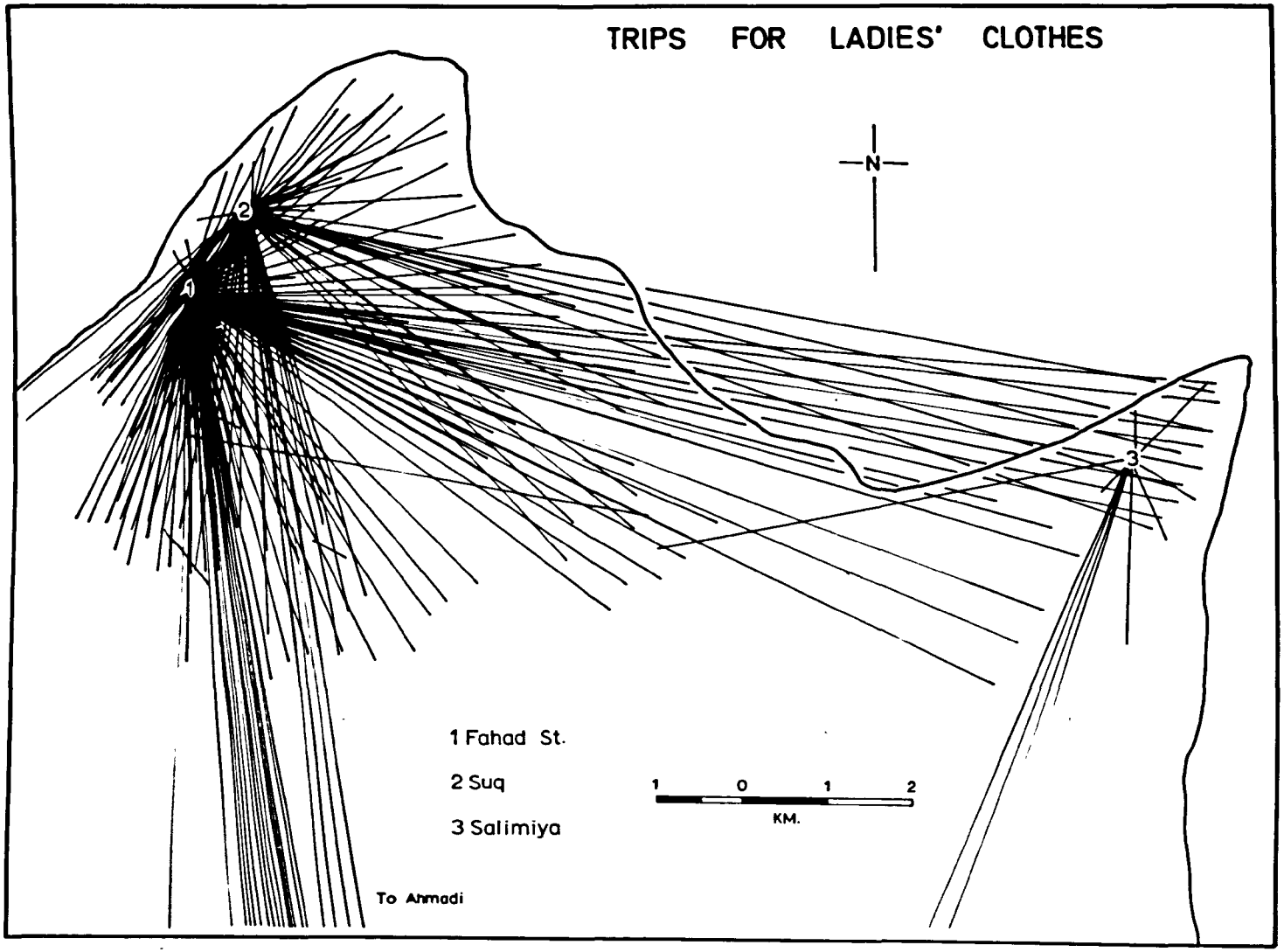


Figure 11.5 Desire lines linking shopping centres and shoppers' homes : Kuwait City

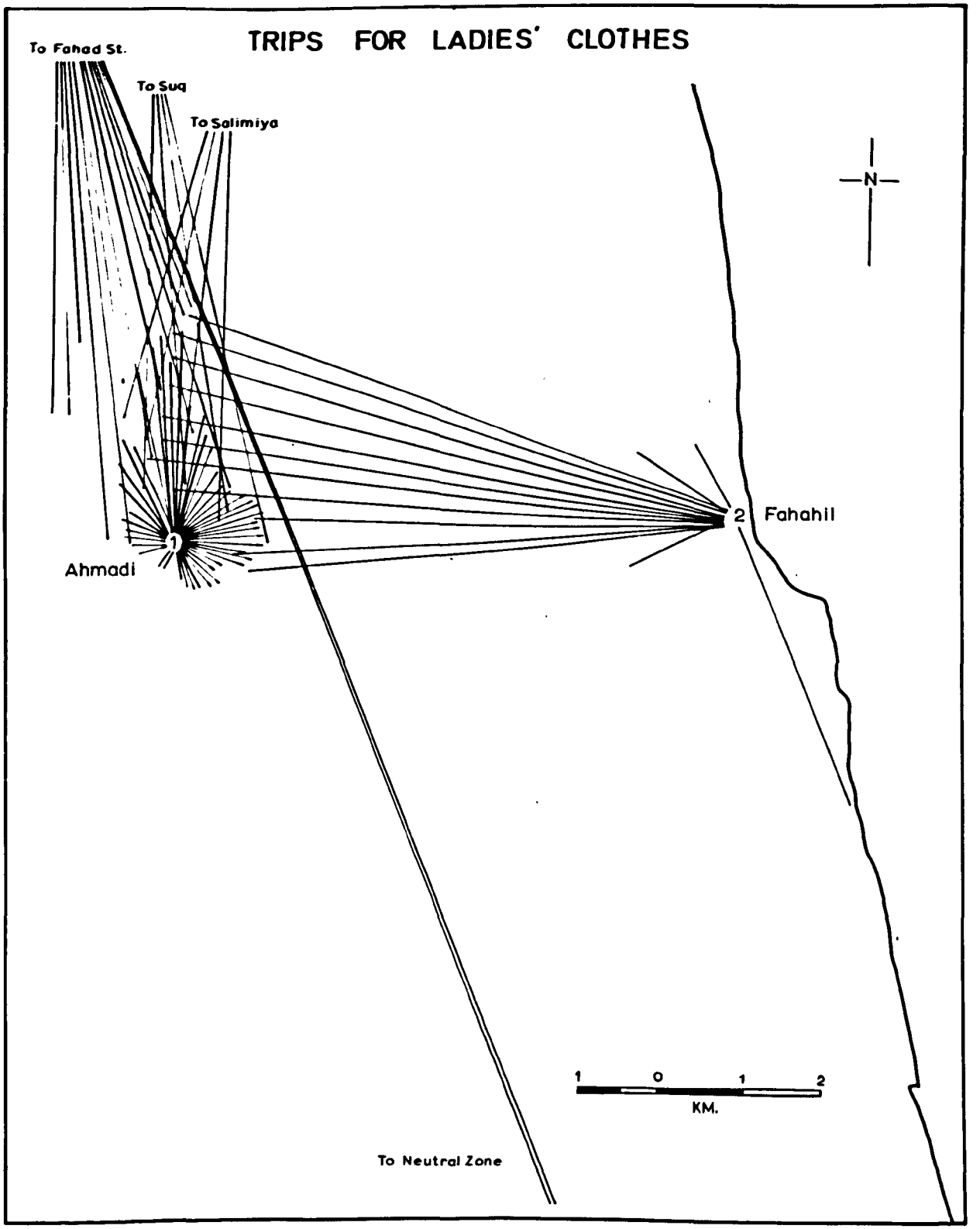


Figure 11.6 Desire lines linking shopping centres and shoppers' homes : south Kuwait.

national, social, and income groups (Chapter 5) with differing demographic attributes and cultural traits. Can we discern any notable differences in the use of service facilities in Kuwait by a more detailed analysis of the questionnaire results?

III. NATIONAL VARIATIONS IN SHOPPING BEHAVIOUR

In Kuwait, with so many different nationalities living together and using the same selection of shopping facilities, we have an unprecedented opportunity for the comparison of national differences in patterns of movement and shopping behaviour. Nationality is, however, only one factor governing shopping movements; as explained in Chapter 5, immigrants from the same source area are not necessarily homogeneous in social and economic status. Income is a problematical variable to isolate in Kuwait (see above), so for our purposes we must study the known factors (e.g. place of residence, nationality, and who does the household's shopping), and adopt the *ceteris paribus* approach with the unknown factors (e.g. household income or size of household).

One way to treat the movement data statistically is to regard the numbers of each national group shopping in selected shopping areas as a frequency distribution. Thus we can compare the differences between any two distributions by using the Chi-square test as modified for more than one variable (Gregory 1964,

pp.159-166). This test examines whether the distribution could have arisen by chance and if not, indicates the statistical significance of differences between any two distributions.

i) Groceries

In several instances, the Chi-square statistic tells us that the probability of the frequency distributions on which the test is based occurring by chance is less than 10 percent - Table 11.2. Hence we can deduce that the differences between where some nationalities shop for groceries and where others shop are statistically significant.

Table 11.2 VALUES CALCULATED FOR THE CHI-SQUARE STATISTIC :

GROCERY SHOPPING

	Indians	Jordanians	Kuwaitis	Egyptians	British	U.S.A.
Indians		24.0	56.5	23.0	31.7	25.5
Jordanians			46.4	10.5	11.6	5.8
Kuwaitis				31.2	80.9	61.7
Egyptians					30.4	14.3
British						11.7
U.S.A.						

N.B. 1) Degree of Freedom = 22

2) Values of 30.0 and over are significant at the 90 percent level of probability.

From Table 11.2 it is clearly apparent that for groceries Kuwaiti's shop in different places from all the other 5 nationalities mentioned in the Table. In every instance, these differences are significant at the 90 percent level and over. Also, British shoppers use different shopping areas from Indians and Egyptians. The explanation of the differences between the shopping movements of Kuwaitis and the five other national groups is traced below.

ii) Household Goods

Apparently, there is little significant difference between the nationalities for the shopping areas selected for the purchase of household goods (Table 11.3). In part this may be due to the limited choice of such shops available in Kuwait (see above). Kuwaitis differ from Britons, however, probably because Britons rarely buy household goods in Kuwait.

Table 11.3 VALUES CALCULATED FOR THE CHI-SQUARE STATISTIC : SHOPPING FOR HOUSEHOLD GOODS

	Indians	Jordanians	Kuwaitis	Egyptians	British	U.S.A.
Indians		14.7	10.3	9.7	12.2	3.4
Jordanians			28.5	10.8	4.8	5.5
Kuwaitis				11.6	31.3	13.6
Egyptians					19.0	4.0
British						7.7
U.S.A.						

iii) Ladies' Clothes

Table 11.4 again brings to light the distinctive buying habits of Kuwaitis, for in every case, except for the Indians, the places where Kuwaitis shop for ladies' clothes are different from the other nationalities with levels of significance at 90 percent and over.

Table 11.4 VALUES CALCULATED FOR THE CHI-SQUARE STATISTIC : SHOPPING FOR LADIES' CLOTHES

	Indians	Jordanians	Kuwaitis	Egyptians	British	U.S.A.
Indians		7.7	24.3	7.0	6.9	2.8
Jordanians			49.7	3.4	3.9	4.3
Kuwaitis				44.1	47.9	36.0
Egyptians					10.1	2.9
British						7.5
U.S.A.						

See notes at foot of Table 11.2

IV. OTHER ELEMENTS AFFECTING SHOPPING PATTERNS

Nationality and distance have been the two factors emphasized in the analysis of shoppers' movements so far. There are other factors, some of them peculiar to Kuwait, which affect the overall pattern of shopping.

i) Suburban Co-operatives

In Chapter 7, the establishment of local shopping centres in the new suburbs was referred to; these centres - some as yet (1969) incomplete - each comprise a major supermarket, a greengrocers, a bakers, and a parade of local need shops such as a laundry, a hairdressers, and an electrical goods shop (Plates 11.1 and 11.2). Up to April 1968, 7 such shopping centres were operating in Dasma, Faiha, Kaifan, Qadisiya, Mansuriya, Shamiya, and Shuwaikh.

In organization, these centres differ greatly from retailing establishments elsewhere in Kuwait. Each centre is run as a co-operative enterprise by a professional manager and an elected committee. Shares can be purchased by Kuwaitis only, while membership of the co-operative is restricted to residents of the neighbourhood in which the co-operative is located. While all customers benefit from the co-operative's lower selling prices, only members can also benefit by dividend receipts. There is thus a strong financial incentive for Kuwaitis living in a new neighbourhood to shop in that neighbourhood's co-operative centre.

Each co-operative operates its own supermarket, but other smaller shops are let out at rates based on a percentage of total turnover. Table 11.5 lists these percentages. Dividends and other benefits are similarly available in these associated shops.

Plate 11.1 Shuwaikh Co-operative Centre. Note the rectangular layout of the roads.

Plate 11.2 Shamiya Co-operative. The main supermarket is on the right.

Table 11.5 CHARGES FOR PRIVATELY OPERATED SHOPS IN QADISIYA CO-OPERATIVE CENTRE

Commodity Sold	Rent as % of Turnover
Electrical Appliances	2.5
Shoes	5.0
Vegetables and fruit	10.0
Books and newspapers	11.0

Source : Mr. Bahij, Director, Qadisiya Co-operative

Hence, the strong preference of Kuwaitis for their local co-operative centre shown in the movement studies can be explained by the financial attractions offered by these centres. Food products in the centres are slanted towards Arab consumers so that the range of goods in the co-operatives may be important in making Europeans and other non-Arabs shop elsewhere.

ii) Choice of Goods

This last point about the range of goods offered in any single centre is an important one. Field observations suggest that consumer preferences fall into 4 major classes; preferences expressed by Europeans; by Arabs as a whole; by lower class labourers; and by Asians.

Shops with a special attraction to Europeans are located in Salimiya and Fahad Street (Fig.7.1). There, shops

familiar in form to shops in Europe can be found (Plate 7.11), while goods offered include European or American foods and clothing styled in the European fashion. The "New Supermarkets" in Fahad Street, in Salimiya, and in Ahmadi offer a range of frozen and tinned goods familiar to "European" eyes. Another supermarket in Dasman, "Zam Zam's, has English-speaking assistants and special discounts for account customers.

Arabs as a whole use all the areas mentioned, but most families make special use of the co-operatives. One section of the Arab community together with the single Iranis, apparently the lower class labourers and single men, seems to prefer the old suq where traditional clothing can be bought (e.g. dishdashas, aguls, and kafirs) and where simple foods are arrayed in rows of tiny stalls (Plates 10.2, 10.3, and 10.4).

Asians, mainly Indians and Pakistanis, also rely on the suq for many needs, including sari lengths and Indian vegetables. Two small shops specialize in Indian food needs in Fahad Street where many of the Asian community live.

V. SHOPPING FREQUENCY

While the distribution of shops by type and number in Kuwait was established by the field survey, it was only by interviewing a sample of shoppers that the frequency with which certain classes of shops were visited could be established. From both commonsense and established theoretical standpoints

it was to be expected that food shops would be visited most frequently and non-food shops less so.

In the questionnaire (Appendix 4), two questions were asked on shopping frequency. First, respondents were asked to rank 11 types of shop according to the frequency that each type of shop (regardless of location) was visited. Table 11.6 presents the results. Clearly, food shops were most frequently visited, followed by women's clothing shops and other non-food needs.

Table 11.6 SHOPS RANKED BY THE FREQUENCY OF VISITS PAID TO EACH

	PERCENTAGE OF ALL RESPONDENTS PLACING IT :						
Type of Shop	1st	2nd	3rd	4th	5th	6th	7th
Grocers	36	18	9	7	6	7	5
Supermarket	28	10	14	21	5	8	3
Ladies' Clothing	16	6	8	13	18	14	12
Butchers	7	13	23	10	5	3	5
Greengrocers	7	33	21	12	6	3	4
Cloth for Clothes	3	15	10	12	22	11	11
Tailors	2	3	9	12	11	20	9
China and Glass	-	-	3	7	10	12	20
Furniture	-	-	-	3	4	3	9
Radio and Television	-	1	1	1	6	5	3
Men's Clothing	-	-	9	1	5	13	18
TOTAL	100	100	100	100	100	100	100

Calculated from : Questionnaire Survey, 1968.

Secondly, people were asked how many times per month they visited selected shops. After experimentation, three types of shops were selected as representative of different hierarchical levels. Results are tabulated in Table 11.7. Thus it seems that, as expected, grocery and food shops are visited most frequently (the modal value was 4 times monthly) and other non-food shops less often (modal values for visits to household appliances and ladies' clothing shops were once or twice per month respectively).

Table 11.7 FREQUENCY OF TRIPS MADE TO SELECTED SHOPS

Type of Shop	PERCENTAGE OF RESPONDENTS VISITING : 0 - 9 Times per month	10 - 19 Times per month	20 & Over Times per month
Grocers	59.4	17.4	23.2
Household Appliances	98.3	1.6	0.0
Ladies' Clothing	97.4	2.1	0.5

Source: Field Survey, 1968.

VI. WHO DOES THE SHOPPING

In response to the question "Who does most of your shopping?", most of the respondents said that the wife and the whole family shared most of the shopping in almost equal proportions. However, as Table 11.8 shows, there were some

important national variations to this average pattern. British and American wives did most of the shopping while Arab households generally shopped all together. Indians fell between these two extremes.

Table 11.8 WHO DOES MOST OF THE SHOPPING IN KUWAIT (PERCENTAGE OF RESPONDENTS)

Nationality	Husband	Wife	Whole Family	Boy or Cook
Arabs :				
Jordanians	40.0	3.3	46.7	0
Lebanese	100	0.	0	0
Egyptians	0	14.3	85.7	0
Kuwaitis	16.0	17.0	60.4	6.6
Indians	11.1	33.3	47.2	8.3
British	6.3	78.5	12.7	0
U.S.A.	2.3	83.7	11.6	0
TOTAL	13.5	43.8	39.4	3.4

Questionnaire Survey, 1968.

This variation in who does most of the shopping is due to the varying degrees of freedom which women are allowed in Arab and other countries. In Arabia, female emancipation is only beginning, so that husbands, together with children,

usually accompany their wives on visits beyond the home. This has a bearing on shoppers' movements, since single women are more unusual sights in the suq than whole families who are common sights there and in the co-operative centres. Broadly, this factor divides shoppers into two groups - Arabs and non-Arabs subdivided into "traditionals" and "moderns". Apparently both elements affect where the shopping is done.

VII. PEDESTRIAN SHOPPERS

Since all buying in Kuwait is done on foot, even though a car is almost invariably used to reach the shopping centre, a pedestrian shopper density survey was carried out at all major centres in Kuwait. This survey had two major aims; first, it was designed to check the popularity of parades of shops as outlined by the questionnaire responses, and second, it tested whether rents, key-money, and land values bore any relationship to the number of potential customers passing a shop doorway (Berry 1967, pp.49-51).

Most shopping in Kuwait takes place in late afternoon and in early evening. To obtain a representative picture, counts of pedestrians passing fixed points in front of a group of shops were taken at these periods at half-hourly intervals throughout every shopping centre in Kuwait. The results, obtained over a period for every day of the week, were averaged and expressed as a number of pedestrians passing

certain points per minute during the main shopping hours (Table 11.9). Radically different shopping hours apply during the Holy Month of Ramadhan; the effect of this month on pedestrian densities is not assessed.

Despite the narrowness of the alleys compared to the broader pavements of Fahad Street, the suq was by far the busiest shopping centre in Kuwait. The northern edge of the suq, where greengrocery, meat, and fish stalls are concentrated, was by far the busiest section within the suq. Rows of stalls sell virtually identical ranges of goods and turnover is very high. However, low key-money values suggest that profits are not high; rather, it seems that the high volume of turnover sustains the traders in business.

Marked differences in numbers of pedestrian shoppers are recorded over very short distances, e.g. the west side of Aziz Street in Mubarakia carries twice the traffic on the opposite pavement. These differences are closely related to the presence of a parade of shops; individual shops offer only a few attractions to shoppers, while a block of shops attracts in greater proportions than expected. Open spaces or a demolished site evidently drive shoppers elsewhere.

Table 11.9 DISTRIBUTION OF PEDESTRIAN SHOPPERS DURING THE MAIN SHOPPING PERIOD IN VARIOUS CENTRES IN KUWAIT

District & Street		Location of Count & Notes	Pedestrians passing per 10 minutes (Average)
Fahad Street, City Centre.	1.	South side, Al-Mousa Store	115
	2.	,, ,, Safaaed & Dawlat's	186
	3.	,, ,, Syrian Airlines	124
	4.	North side, Kuwait National Travel	137
	5.	,, ,, Kayser Stores	201
	6.	,, ,, Jamil Stores	254
	7.	,, ,, Jabri's	212
Suq	8.	Safat Square pavement	360
	9.	Top of Arms Alley	20
	10.	Aziz Street, Scribes Entry	230
	11.	Eastern General Store	320
Mubarakia	12.	West side, Aziz Street	420
	13.	East side, (Duaigh)	220
Suq al-Akhdar	14.	Spice Alley	620
	15.	Gharabally Street	550
New Street	16.	East side, Sanyo Shop	390
	17	West side, Singer Shop	230
Hawalli	18.	Tunis Street	50
Salimiya	19.	Main Street	206

Source : Field Survey, March-April 1968

Beyond Mubarakia and suq areas, the number of shoppers falls off rapidly. Fahad Street experiences only light traffic and as Fig.11.7A shows, this traffic tapers off towards the ends of the street.

It seems then that the surveys of land values, rents, key-money, and pedestrian shoppers show some correlation. While specific elements (e.g. Government-controlled rents) disrupt the overall pattern, it seems that the most popular shopping area (the suq) is also the most expensive, and that the price of property declines as shoppers become less numerous (e.g. in the suburbs). While this overall conclusion is unsurprising, it does highlight a special aspect of the Kuwait situation, which is the relationship of the newly-created "modern" shopping centres (e.g. Salimiya and Fahad Street) to the old suq.

VIII. HOUSEHOLD EXPENDITURE AND FAMILY BUDGET SURVEYS

Despite difficulties encountered in eliciting details of family income and expenditure amongst respondents to the questionnaire study, two sources of such information were available. First, the Government (Planning Board) had just completed a sample survey of income and expenditure amongst 1,344 families. Preliminary results of this survey were kindly made available. The Income groups of the sample families are summarized in Table 11.10.

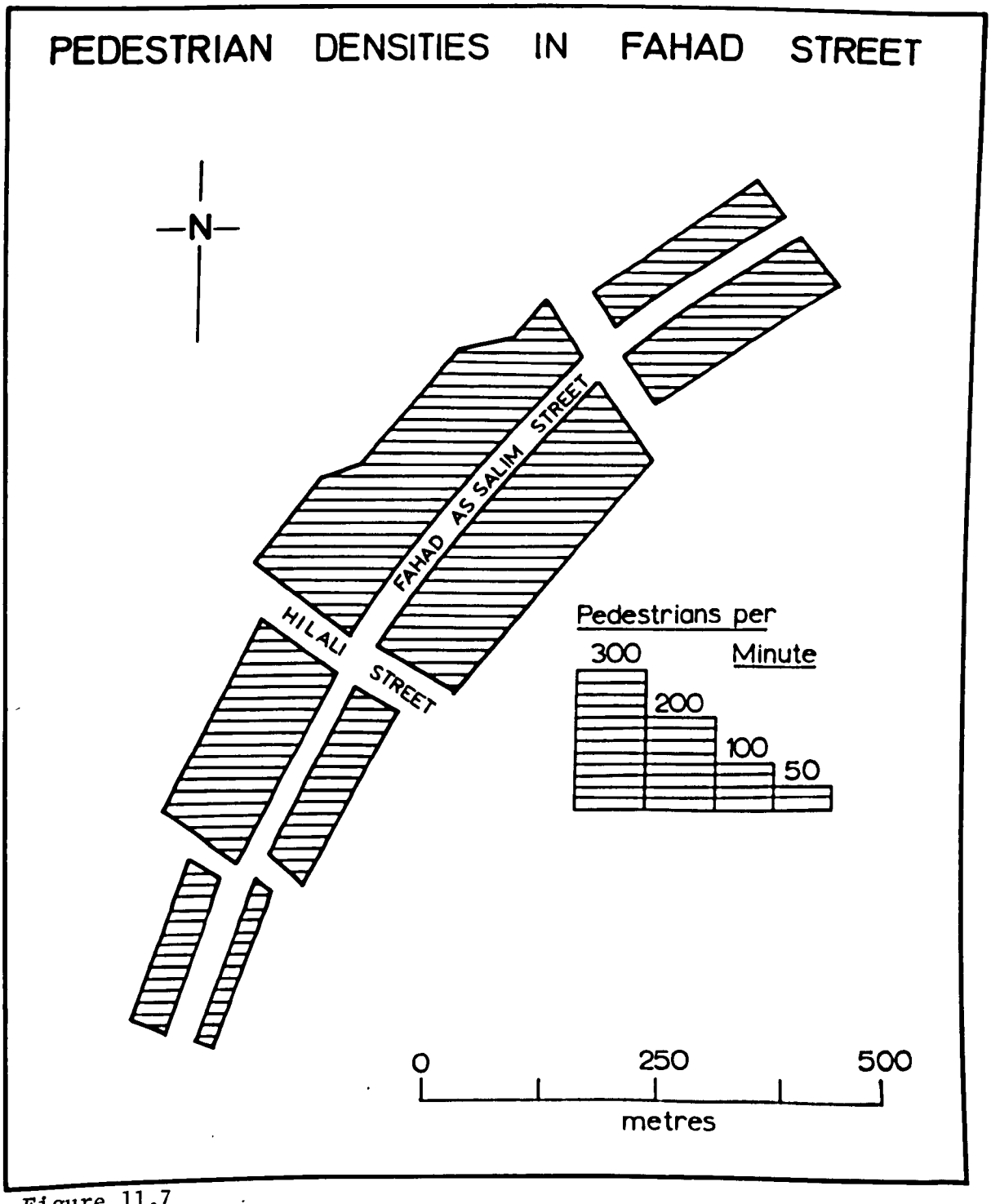

PEDESTRIAN DENSITIES IN FAHAD STREET
N
FAHAD AS SALIM STREET
HILALI STREET
Pedestrians per Minute
300
200
100
50
0
250
500
metres

Figure 11.7

Table 11.10 THE DISTRIBUTION OF HOUSEHOLD INCOME BY INCOME CLASSES IN KUWAIT 1966

Annual Household Income	Kuwaiti Families %	Non-Kuwaiti Families %
Less than K.D. 500	4.5	7.6
K.D. 500 - 1000	20.1	20.8
K.D. 1000 - 2000	35.8	40.6
K.D. 2000 - 3000	16.9	16.4
K.D. 3000 - 4000	10.3	8.1
K.D. 4000 - 5000	2.5	3.6
K.D. 5000 - 6000	2.1	1.1
More than K.D. 6000	7.8	1.8
	100	100

Source : Family Budget Survey, Report, 1966, Appendix 9.

Secondly, the Kuwait Oil Company, in an attempt to gauge the local cost of living for fixing salary and wage scales in Kuwait, currently employes a firm of consultants to undertake carefully controlled sample household expenditure surveys amongst its employees. K.O.C. divides its labour force into "staff" and "payroll employees" - the former constituting the higher managerial grades and the latter the wage-earning labourers and clerks. Actual figures in K.D. were confidential, but K.O.C. kindly consented to release the weighted averages (i.e. percentage expenditure figures for specified groups of goods and services)

for staff and payroll employees. These two sources of information provide as full a cover of family spending as possible under the circumstances.

i) Distribution of Expenditure

Expenditure varies greatly between households employed by the oil company and those employed elsewhere in Kuwait, largely because K.O.C. provides its employees with cheap accommodation. Broadly, expenditure on housing and housing services is higher in Kuwait than in Great Britain. Several other points are of note from Table 11.11.

i) Kuwaitis and non-Kuwaitis have different expenditure patterns since Kuwaitis spend a great deal more on housing (mainly house purchase and repairs). Non-Kuwaitis cannot own houses in Kuwait.

ii) Spending by non-Kuwaiti households as a whole is lower (K.D. 52.4 per month) than for Kuwaitis (K.D. 71.9). Non-Kuwaitis, however, remitted on average K.D. 6.2 monthly abroad compared with the figure of K.D. 2.4 for Kuwaitis. These figures are underestimates (Kuwait Currency Board, 1967, Sixth Annual Report), but the ratio of non-Kuwaiti to Kuwaiti remittances is probably correct. On average, each Kuwaiti spends K.D. 1.43 monthly in Kuwait compared with K.D. 1.04 for each non-Kuwaiti.

iii) Kuwaitis spend proportionately more on cereals than non-Kuwaitis, who spend most of their food budget on meat, fish,

fruit, and vegetables. These figures confirm suggestions made above regarding the contrasting food shopping habits of various nationalities in Kuwait. Unfortunately, the individual nationalities of the respondents in the Government survey are not known.

iv) Surprisingly, total outgoings per household are slightly below outgoings per month in Great Britain (Table 11.11). We in Britain spend less on food and housing (excluding oil company employees) and more on transport and services (e.g. medical needs, educational expenses, and radios and television licences and rentals) - most of which are provided freely in Kuwait.

Table 11.11 FAMILY EXPENDITURE IN KUWAIT (1966) AND GREAT BRITAIN (1965) COMPARED

PERCENTAGE OF TOTAL EXPENDITURE

Commodity or Service	Kuwaitis	Non-Kuwaitis	K.O.C. Employees		Great Britain
			Pay-roll	Staff	
Cereals	6.1	5.7			3.7
Fruit and Vegetables	10.2	12.2			3.9
Meat and Fish	12.5	12.5			7.5 *
Milk, Eggs & Fats	5.4	6.1			5.3
Sweets & Soft Drinks	4.4	5.1			2.5
Other Foods	2.2	3.4			3.9
Total Food	40.8	45.0	53.4	31.0	31.8
Clothes & Textiles	8.0	7.8			7.8
Shoes	0.9	1.1			1.8
Total Apparel	8.9	8.9	8.0	10.0	9.6
Total Housing (including durable household goods)	32.2	27.2	14.0	17.7	24.3
Transport	10.4	7.7	8.5	12.7	12.4
Other Goods & Services	7.7	11.2	15.7	22.5	21.9
Total Services	18.1	18.9	24.2	35.2	34.3
Grand Total	100	100	99.6	93.9	100
Average Monthly Household Expenditure (K.D.)	71.9	52.4	N.A.	N.A.	85

* Includes fish & chips.

Sources : i) Kuwaitis and non-Kuwaitis from : Report on the Family Budget Survey, 1968, Appendix 4.
ii) K.O.C. data from : Personnel Services Division, Kuwait Oil Company, Ahmadi (1962).
iii) G.B. statistics from : Ministry of Labour, Family Expenditure Survey, 1965, Table 1.

ii) Spending and Numbers of Establishments

Kuwait's family budget survey provides enough information to calculate crude gross turnover rates for several types of retail establishments in the State. First, the ratio of people per establishment warrants examination.

Overall, there were more shops of all types per head of population in Kuwait than in Great Britain. Shops in Kuwait, especially in the suq, are smaller than those in Great Britain which probably explains this overall discrepancy. The ratio of persons to each grocer's shop is remarkably similar in both countries, but ratios for clothing shops are lower in Kuwait and higher for house-hold goods' shops than in Great Britain (Table 11.12).

Table 11.12 RATIOS OF PEOPLE TO ESTABLISHMENTS OF VARIOUS KINDS IN KUWAIT AND BRITAIN

	KUWAIT (1968)			GREAT BRITAIN (1961)		
Type of Establishments	Population	No. of Shops	Persons per shop	Population	No. of Shops	Persons per shop
All types	692,000*	11,285	61	51,534,000	577,307	89
Grocers & Food Retailers	,,	3,581	193	,,	278,458	185
Clothing and Footwear	,,	1,931	359	,,	92,426	558
Household Goods	,,	506	1,368	,,	73,319	703

*Based on a population estimate for January 1968; see Chapters 5 & 6.

Sources: i) Kuwait : Field Survey, 1968.
ii) G.B. : Board of Trade, 1963, Report on the Census of Distribution, 1961, Part 1, Table 1.

By taking average monthly household expenditure as revealed by the Government Survey of 1966 and multiplying by the estimated number of households in 1968 (118,162), we can arrive at a gross figure for expenditure in Kuwait in an average month. Dividing this figure first by commodity groups (e.g. assuming that 42.9 percent of this total is spend on food - Table 11.11), and then by the number of establishments recorded in that commodity group, we can derive approximate levels of turnover for each establishment selling a given commodity. Results of this calculation are tabulated and compared with British statistics in Table 11.13.

This table, indicating higher levels of turnover per food shop in Kuwait, but lower levels per clothing or household goods shop than in G.B., provides a possible explanation of the low ratio of people per grocer's shop in Kuwait. It could be that with over 40 percent of the family budget going on food the number of food shops in Kuwait expands to deal with this high turnover.

As for the very low turnover figures in clothing and household goods shops, other evidence suggests that the figures err on the low side. Several traders during the rent survey volunteered information on turnover; in Fahad Street, especially, proprietors put takings in women's clothing shops at K.D. 1000 monthly. In addition, the profit or mark-up on non-food

commodities is higher than on food itself, so that slightly lower turnover rates are possible in non-food than in food shops.

Table 11.13 ESTIMATED TURNOVER PER SHOP COMPARED WITH GREAT BRITAIN

	KUWAIT (1966)		GREAT BRITAIN (1961)	
	Number of Shops	Monthly Turnover K.D.	Number of Shops	Monthly Turnover £.
Food Shops	3,581	1,495	278,458	1,238
Clothing and Footwear	1,931	327	73,319	1,181
Household Goods	506	434	92,426	1,207
All Shops	11,285	628	577,307	1,287

Sources : i) Kuwait : Family Budget Survey, 1966 (Report, 1968), Appendix 4, & Field Survey, 1968.

ii) Great Britain : Board of Trade, 1963, Census of Distribution (Report 1963), Part 1, Table 1.

N.B. In 1966 the pound sterling was on a par with the Kuwaiti Dinar.

IX. SYNOPSIS

From this brief comparative study of family expenditure it seems that the different distribution of spending has a bearing on the number of establishments operating in Kuwait. With heavy spending on food, both the number of grocers shops and their average monthly turnover are high - as high as levels in Great Britain. Despite lower turnover figures for all types of shops

in Great Britain, compared with Kuwait, Kuwait has more shops per unit population. Two reasons were given to explain this - the smaller size of Kuwait shops and generally high levels of mark-up (Kuwait Chamber of Commerce, personal communication).

Both different patterns of buying and household expenditure in Kuwait are important factors in the composition of shopping centres. Changes in these patterns will affect the central place hierarchy and shoppers' movements in the future.

CONCLUSION

Chapters 10 and 11 have dealt in detail with the distribution, organization, and use of service and retail establishments in Kuwait. Clearly, the study suggests several important conclusions.

First, in Chapter 10, the existence of a central place system in Kuwait which conformed to established notions on such theories was confirmed. Kuwait, even in the context of oriental cities, has many special attributes - personal affluence, demographic and social diversity, and peculiar cultural traits - all of which, it was hypothesized, would combine to disrupt the central place system. This was proved erroneous, for the size and type of service establishments in the centres examined closely confirmed classical central place theory.

Secondly, the study of consumer movements further substantiated the central place system outlined in Chapter 10,

while bringing to light the discrimination by national groups between the places where three ranges of goods were normally bought. This difference was explained by the wide variation in shop type coupled with the range of goods sold and the cultural background of the purchaser. While Kuwait has a more than usually diverse population, this research finding has a wider significance. In many instances in both the developed and developing worlds, communities with dissimilar cultural traits live together in one city. Examples include the black immigrants in Birmingham; the Italians in Luxembourg; the Puerto Ricans in New York; the Catholics and the Protestants in Belfast; and the Ibos in Lagos. It may be that, as in Kuwait, the size and location of these communities affects both the distribution and the type of retail facilities provided within the general central place system. Established central place theory only considers these variations in general. Results from work in Kuwait suggest that there is very wide scope for the examination of the shopping behaviour of specific communities within cities which could add another dimension to central place theory while forming an important part of any broader sociological investigation.

Finally, we can construct a hierarchy of central places in Kuwait using all available data (Table 11.14) which answers a point raised in Chapter 8 concerning the relationships

of the suburbs and outlying centres to the Old City. The 25 centres in Kuwait are rank-ordered, using a "Centrality Index" which is the sum of the centre population, the number of service establishments, and the number of shop types in each centre. Four levels are discerned - the Old City; two "cities"; six "towns"; and sixteen "villages". In the last group are included most of the suburbs of the capital (excluding Hawalli and Salimiya) as well as a range of smaller outlying centres. It seems that many of the latter are functionally similar to the City's suburbs. One tentative conclusion from this is that because of the close planning control exercised over these newer neighbourhoods, the development of adequate suburban shopping facilities may have been inhibited. The practice of converting garages of private houses into small shops confirms this thesis. Thus, there is some definite justification for the lack of functional integration of the neighbourhoods into the overall city system.

This study of retailing and consumer behaviour highlights several aspects of Kuwait's urbanization and contemporary functions. The parallels and differences between Kuwait and other cities - Western and non-Western - must finally be considered in the Conclusion.

Table 11.14 THE HIERARCHY OF CENTRAL PLACES IN KUWAIT

National Centre	Cities :	Towns :	Villages :	
Centrality Index over 6000	Index 1400-1700	Index 200 - 700	Index 3 - 140	
Old City	Hawalli	Fahahil	Kaifan	Dawha
	Salimiya	Abruq Khaitan	Dasma	Shuwaikh
		Farwaniya	Faiha	Fantas
		Jahra	Qadisiya	Maqwa
		Ahmadi	Shamiya	Mansuriya
		Shuaiba	Sulaibikhat	Shaab
			Di'ya	Abu Halifa
			Khaldiya	Manqaf

CONCLUSION

Throughout this work an attempt has been made to balance the detailed analysis of Kuwait's recent urban experience against the wider implications of such an episode. In several instances Kuwait has been shown to possess attributes common to few other developing nations, but the main task of this Conclusion is to indicate the generalities emerging from the study, and at the same time to confirm or refute the five hypothesis proposed in Chapter 1.

First, the connections between urbanization and economic development were reviewed. In several cases in the developing world as a whole the links joining the two processes were questioned. From several different studies of urbanization (Azeez, 1968; Hoselitz, 1955; Breese, 1966) it appears that the causes which underlay the growth of cities in Western Europe last century are not the same causes behind the contemporary phase of urbanization in the East. This present period of urbanization is apparently distinguished from its European predecessor by its indirect links with economic development per se. McGee coined the term "pseudo-urbanization" to describe such a process of urbanization divorced from economic development.

This study of Kuwait's urbanization confirms the broad hypothesis that different factors from those which

prevailed in 19th century Europe are responsible for recent urban developments in the State. As Chapters 2 and 3 showed, a rural-farm population has never been a characteristic of Kuwait's settlement pattern. However, many of the international migrants arriving in Kuwait are apparently derived from rural areas. In view of the paucity of statistics on this particular point we can only conclude that the steady drift of surplus labour from the countryside into the towns which occurred in Europe does not apply in Kuwait's case.

A further distinction between the urbanization process in the West and that occurring in Kuwait is the type of employment taken up by new arrivals. In Europe new urban arrivals sought jobs in the region's growing industries (Lampard, 1955). In Kuwait most of the migrants obtain employment in the service sector of Kuwait's economy (Chapter 4). Although Kuwait's economy was shown to have an in-built service bias, nevertheless the provision of the bulk of the employment opportunities in the State's tertiary sector is significantly different from the position in the West. Several workers have shown that an emphasis on the provision of services is a characteristic of many of the countries of the developing world, and Kuwait appears to confirm these observations. The proliferation of personal service activities and small-scale retailing can be witnessed

as a symptom of urbanization in several cities of the Middle East, including Baghdad, Beirut, Doha, Dubai, and the larger towns of Turkey.

A third aspect of urbanization in Kuwait is the relatively large significance of "push" factors in the migrants' areas of origin. Despite Kuwait's employment opportunities and free health and educational facilities, field observation in many of the source areas of Kuwait's immigrants strongly suggests that the "push" element in these areas outweighs the "pull" factors within Kuwait. For example, in southern Iraq, conditions of rural poverty and abject misery still prevail. Both Baghdad and Kuwait are important centres for in-migration : thus it seems that "pull" factors determine the migrants' new location while "push" factors are responsible for the original decision to move (see Azeez, 1968 for details).

In addition, the growing influx of Palestinians and Jordanians into Kuwait, together with other nationalities, directly associated with the present war zone, is further proof of the importance of "push" factors in the overall growth of Kuwait's population.

With this in mind, it appears unnecessary to search for further correlations, as Schnore (1964) has, between economic development and urbanization in many nations of the developing world. The example of Kuwait illustrates

that external factors - political upheavals, war, and the oil industry - can precipitate urban growth without any need for concomitant growth in the State's economy. Thus, as a conclusion to this section, it appears that economic development may play a secondary role in stimulating urban growth, particularly in the developing countries, contrary to the opinions of several writers such as Motwani (1951) and Tisdale (1942).

A possibility suggested in the hypothesis presented in Chapter 1 was that since urbanization is not a unidirectional process, both historical and regional variants of the process must be expected. It seems we are now in a position to recognize at least one such regional variant, comprising the oil-producing states of the Persian Gulf. These states - Qatar, Bahrain, the Trucial States, and the Sultanate of Muscat and Oman - are apparently undergoing similar processes of population expansion by immigration and of urban growth to those described for Kuwait. In many instances the physical attributes and form of expansion of the urban areas bears a striking similarity to that of Kuwait.(Figs. 12.1 and 12.2). While the extent to which these states resemble Kuwait depends on their volume of oil exports and how long they have been producing oil, their familial similarity is unmistakeable. Large scale international immigration is, as in Kuwait, the

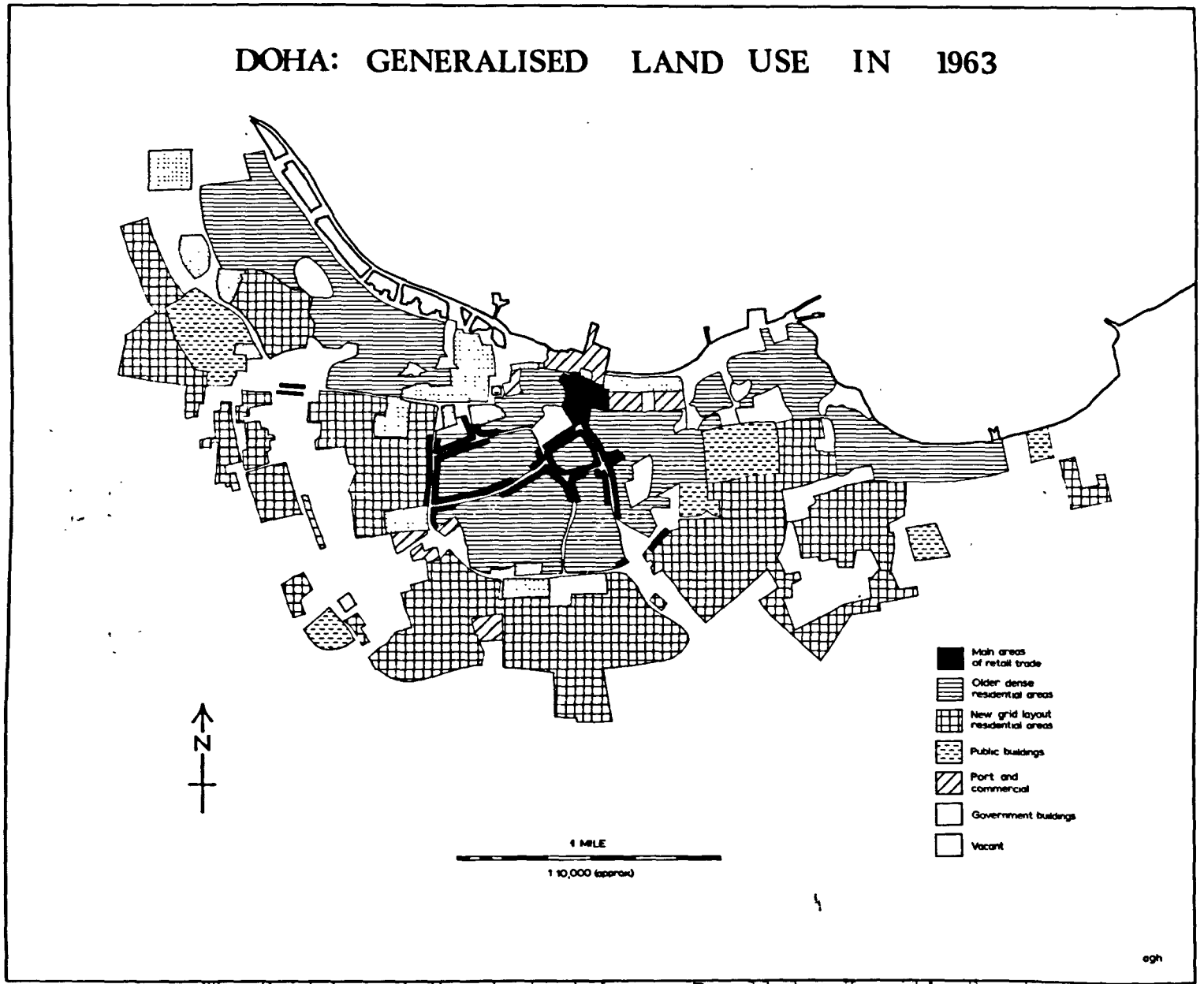


Figure 12.1 The Grid Layout Residential Areas Parallel. Kuwait's Development

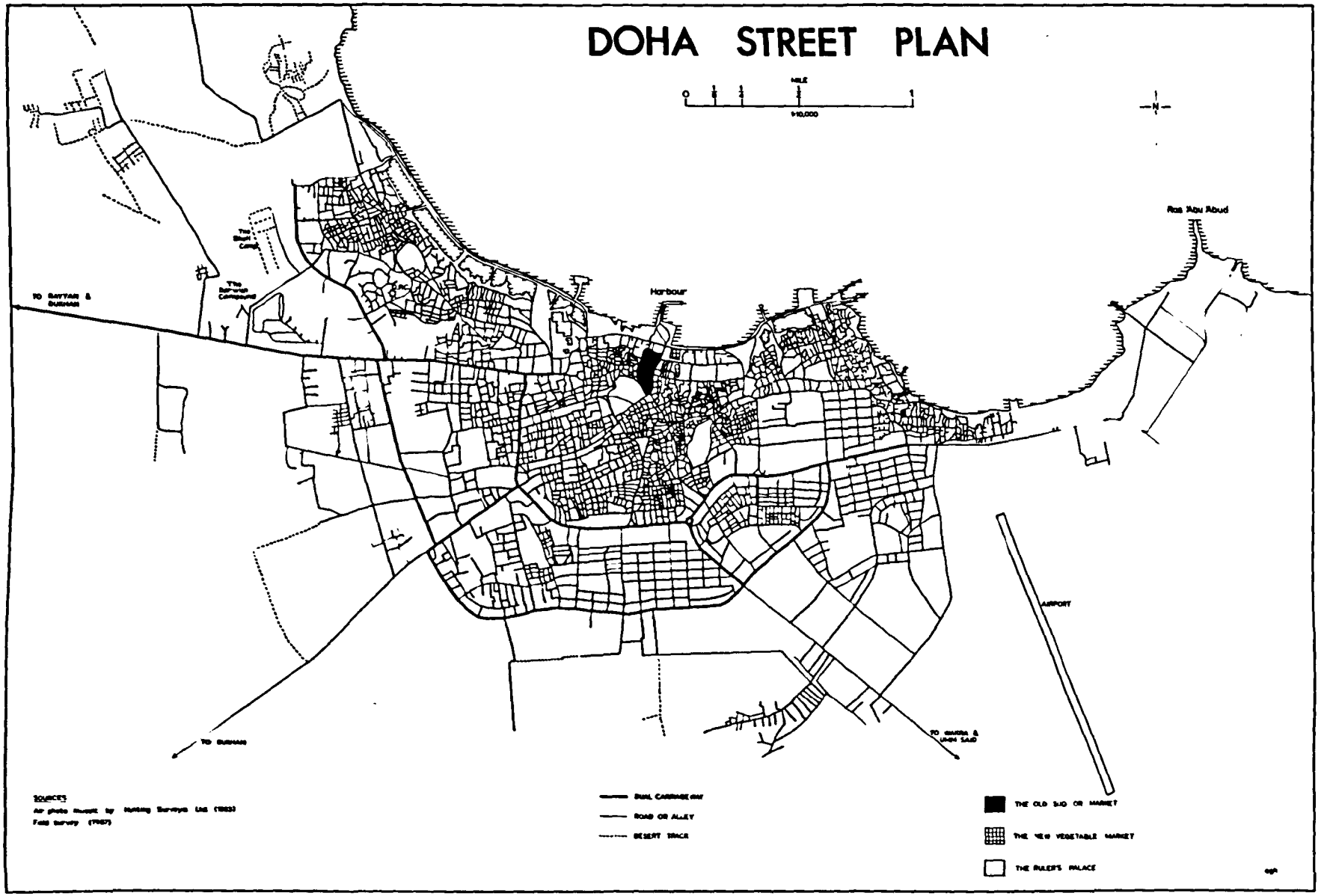


Figure 12.2 Note the radial street pattern similar to that of Kuwait's .

principal component of their population increase and the growing size of their urban areas (see Hill, in Clarke & Fisher, forthcoming).

By moving to more specific conclusions from the second Part of this present work we can provide answers to some of the tentative propositions set out in Chapter 1. First, it was hypothesized that in developing countries a modern and a traditional sector can co-exist within a single nation's frontiers. In Kuwait, analysis of the social and economic attributes of the population in Chapter 9 revealed that immigration had introduced a further dimension - a distinction between citizens and aliens as well as a distinction between "higher status" and "lower status" non-Kuwaitis. These contrasts in population composition reflect a distinction within the economy itself, which contains a modern efficient, and largely foreign-owned, industry (oil production) located close to Kuwait City which in function has altered very little from the "traditional" trading centre which it was only 25 years ago.

Results of the analysis of the 1965 Census data showed that the three major groupings of population recognized - Kuwaitis, higher status non-Kuwaitis, and lower status non-Kuwaitis - were clearly segregated by place of residence in the capital and in other urban areas. The planned development

of the city and the Government land purchase scheme (Chapter 7) were both instrumental in encouraging this segregation, but regardless of such special factors, such a pattern of socio-economic differentiation bears a striking resemblance to the structure of other Oriental cities as described by Gist (1958), Churchill (1954), Harrison (1967), Sen (1960), Bopegamage (1957), Singh (1955), and Gulick (1967). These studies suggest that marked residential segregation by religion, caste, occupation, and nationality is a common feature of all such cities. It seems that the socio-economic structure of Kuwait conforms closely to these other Oriental examples.

As a corollary, we can conclude that the composition and distribution of Kuwait's residential areas differ from idealized patterns described for Western cities. The "sector", "concentric zone", and "multi-nuclear" theories proved individually inadequate to explain Kuwait's urban structure, and by extension, the structure of several other Oriental cities.

Despite this difference in urban ecology between Kuwait and Western cities, results of the survey of the type and distribution of service and retail establishments in Kuwait showed that the commercial structure of the City and surrounding centres conformed very closely to predictive

models evolved in Western Europe and North America. Nevertheless, the composition of these shppping areas and of individual shops was very different from their Western equivalents. Cultural differences, measured in the present study by nationality, emerged as factors of prime importance in determining the frequency and pattern of use made of these shops and service facilities throughout the urban areas. As Chapter 11 showed, this research finding, that the cultural background of shoppers results in wide differences in shopping behaviour, has an important bearing on our established notions on central place theory and marketing geography. Several cities in the Occident as well as in the Orient have contrasting cultural groups resident within their built-up areas. Examples include the Italians in Luxembourg, the Turks in Munchen, the coloured in American cities, immigrants in Birmingham, and even Catholics and Protestants in Belfast. It may be that our notions on central place hierarchies in both developed and developing nations may need revision in the light of more detailed studies of the consumer behaviour of these various cultural groups. The example of Kuwait may stimulate other workers to add another dimension to such theories on contemporary marketing geography.

In conclusion, it appears that the study of Kuwait, in most publications, conceived of as a small anomalous development on the periphery of Arabia, may have some important general lessons for geography as a whole. Notably, many aspects of its development and function have closer parallels in Asia than in the West, despite the strength of the influence of the Western-orientated oil-industry within its frontiers. It is hoped that this study will stimulate other workers to begin the lengthy task of examining in some detail other examples of Oriental urbanization, both for comparative purposes and to clarify the differences between Western and non-Western urbanization as a whole.

APPENDIX ONE

THE GROWTH OF KUWAIT'S HEALTH FACILITIES

DATE AVAILABLE	FACILITIES
1909	First Western-trained doctor in Kuwait.
1911	Mission Hospital for men opened
1919	Extension for women provided.
1930s	One Arab doctor and one pharmacist available until 1948.
1939	Olcott Memorial Hospital opened with 34 beds, 1 - 2 doctors, and 4 nurses.
1940s	Construction of Amiri Hospital began. Two houses in use as a clinic and minor operating theatre.
1947	Small tented hospital in Kuwait City opened by K.O.C.
1948	K.O.C. opened a hospital with 106 beds at Maqwa.
1949	British Chief Medical Officer appointed. 100-bed Amiri Hospital opened with a British matron.
1951	Primitive Mental Hospital opened. Mobile Dispensary begun.
1952	Temporary male Tuberculosis Sanatorium opened with 250 places. Compulsory registration of births and deaths began.
1953	46 doctors and 63 nurses in Kuwait. 90-bed Orthopaedics Hospital opened. 10-bed difficult birth ward.
1954	Plans laid for village clinics.
1955	Nervous and Psychological Disorders section established. First maternity clinic opened. 20 clinics in all. 180 new beds added to Amiri Hospital.

1956 400 beds available in Amiri Hospital.

1957 145 doctors and 400 nurses in Kuwait.
0.7 million hospital and clinic attendances.

1958 Marriage advice service begun.

1959 Improved T.B. Sanatorium opened.
Statistical Section opened in Ministry of Health.
582 beds available in Amiri Hospital.
Composite clinics instigated.

1960 200-bed Southwell Hospital at Ahmadi opened by K.O.C.
230-bed Maqwa Hospital given to State.
24,302 patients admitted to hospitals.
241 doctors available.

1961 First maternity hospital with 100 beds for delivery and 108 beds for women's diseases.

1962. Sabah Hospital opened - 670 beds, 280 beds for maternity.
2,850 hospital beds available in all.
6 other motherhood centres.
80-bed infectious diseases hospital.
21-bed leprosy hospital.
Orthopaedics surgery and clinic.

1963 390 State doctors.

1964 480 doctors and 1000 nurses.
34 preventative health clinics.

1965 516 doctors available.
3,100 hospital beds.

1966 8 hospitals, 2 sanatoria, 40 dispensaries, 36 dental clinics, 11 motherhood centres, and 178 school clinics available.
3,386 hospital beds available.
53,208 patients admitted to Government hospitals.

APPENDIX TWO

SAMPLE PLOTS ACQUIRED UNDER THE LAND PURCHASE SCHEME

Plot Number	Date of Sale	Description of Property	Price per sq.m. in K.D.
A. OLD CITY			
		AREA 1	
1.	1952	open space	5.2
2.	1954	open space	14.1
3.	1956	house	48.5
4.	1960	open space	129.2
5.	1966	house	209.9
		AREA 2	
6.	1954	house (Ministry of Defence)	44.4
7.	1957	house	80.0
8.	1960	house	220.0
9.	1965	house	207.2
10.	1966	house	210.0
11.	1965	house on sea	224.3
12.	1955	house	33.1
13.	1958	house	69.5
14.	1962	house	145.3
15.	1966	house	216.0
16.	1966	house	177.6
17.	1961	house	157.5
18.	1965	house	169.5
		AREA 3	
19.	1955	house	68.6
20.	1960	house	351.3
21.	1961	house	258.4
22.	1966	house (opposite palace)	296.0
23.	1954	house	36.3
24.	1960	house	187.8
25.	1966	house (below mosque in New Street)	491.1
26.	1959	house (Mubarakia)	497.9
27.	1955	house (Safat - Dasman St)	111.7
28.	1957	house (Safat)	211.9
29.	1961	house (Safat)	263.2
30.	1964	house (Safat)	331.0

Plot Number	Date of Sale	Description of Property	Price per sq.m. in K.D.
		AREA 4	
31.	1955	house	32.3
32.	1956	house	40.8
33.	1958	large block - avenue	96.9
34.	1961	house	103.3
35.	1965	house	172.2
36.	1956	house	36.3
37.	1958	house	56.5
38.	1962	house	125.1
39.	1965	house	177.6
40.	1966	house - on sea	217.9
41.	1953	house	9.7
42.	1955	house between Dasman and sea	96.9
43.	1957	house - Dasman Street	49.8
44.	1960	house - Dasman Street	185.7
45.	1966	house	152.3
		AREA 5	
46.	1954	house - on sea	5.6
47.	1955	house	17.8
48.	1962	house	86.1
49.	1966	house	158.8
50.	1956	house	36.3
51.	1960	house	88.8
52.	1966	house	148.0
53.	1953	open space - on sea	16.1
54.	1957	house	46.0
55.	1958	house	80.8
56.	1960	house	121.1
57.	1966	house	193.8
		AREA 6	
58.	1953	open space	4.8
59.	1957	house	52.5
60.	1958	house	61.4
61.	1965	house on sea	184.8
62.	1966	house	136.3
		AREA 7	
63.	1955	house	20.2
64.	1957	many houses	75.4
65.	1961	house (Fahad Street)	197.0
66.	1966	house (Suq Street)	193.8

Plot Number	Date of Sale	Description of Property	Price per sq.m. in K.D.
		AREA 8	
67.	1954	house	25.8
68.	1959	house	177.6
69.	1961	house	148.5
70.	1962	houses etc. opposite old Baladiya	198.7
71.	1955	house - Ministry of Defence	102.1
72.	1959	house	113.0
73.	1961	house	97.9
74.	1962	large area - many houses	171.2
		AREA 9	
75.	1955	house	32.3
76.	1956	house and shop	72.7
77.	1959	open space	32.3
78.	1961	house	130.8
79.	1965	house	169.5
80.	1955	open space	9.7
81.	1958	house	45.0
82.	1960	house	80.7
83.	1966	house	139.9
84.	1955	open space	12.1
85.	1960	house	96.9
86.	1964	house and open space	102.9
87.	1966	house and open space	183.0
		AREA 10	
88.	1957	house	28.3
89.	1959	house - Dasman Street	96.9
90.	1964	house - Dasman Street	121.1
91.	1960	house	150.7
		AREA 11	
92.	1955	house	3.2
93.	1960	house	129.2
94.	1962	house	117.1
95.	1963	house	207.2
96.	1956	house	42.4
97.	1962	house	172.2
98.	1966	house	185.7
99.	1965	house	193.8
100.	1952	open space	4.8
101.	1955	house and outhouses	16.1
102.	1958	many houses	88.8
103.	1964	house	145.3
104.	1966	house	151.0

Plot Number	Date of Sale	Description of Property	Price per sq.m. in K.D.
		AREA 12	
105.	1952	open space	2.0
106.	1956	open space	10.3
107.	1961	house	76.7
108.	1966	house	177.6
		AREA 13	
109.	1953	open court	2.8
110.	1957	open court	19.4
111.	1958	open court	104.9
B. SUBURBS			
		SALIMIYA (main street)	
113.	1955	house	2.0
114.	1959	house	40.4
115.	1959	house	30.3
116.	1966	house	55.0
		RUMAITHIYA	
117.	1958	open space	14.4
118.	1960	open space	17.4
119.	1965	open space	13.9
		HAWALLI - Tunis Street	
120.	1955	house	2.2
121.	1960	house	28.3
122.	1966	house	43.0
		- Beirut Street	
123.	1957	open space	8.9
124.	1957	open space	8.9
125.	1966	house	51.0

NOTES :

1. Prices shown are average figures for front, middle and rear portions of the property acquired.

2. Property acquisition areas for the Old City are shown as Fig. 7.4.

3. For details of property classes, see Chapter 7.

APPENDIX THREE

RENTS AND KEY MONEY FOR 100 SELECTED SHOPS IN KUWAIT

Shop No.	Location	Type of Goods Sold	Class of Property	Size of Property	Key Money K.D.	Monthly Rent K.D.
1.	Aziz Street	Groceries	B.	Store & Office	-	333
2.	"	Ladies Clothing	B.	1 Door	1,500	130
3.	"	Shirts	D.	"	-	25
4.	Mubarakia	Cloth	A.	3 Doors	40,000	350
5.	"	"	B.	1 Door	1,500	40
6.	"	Ladies Haber-dashery	A.	"	25,000	75
7.	"	"	A.	"	25,000	120
8.	"	Perfumes	A.	"	1,500	60
9.	"	Ladies Clothing	A.	3 Doors	25,000	300
10.	"	" "	A.	1 Door	25,000	120
11.	"	Cotton Goods	D.	"	-	90
12.	"	" "	D.	"	-	70
13.	"	Perfumes	D.	"	-	120
14.	"	Suitcases	D.	"	-	Free
15.	"	Clothing	D.	"	-	100
17.	New Street	Watches	B.	1 Door	10,000	175
18.	"	"	B.	"	10,000	200
19.	"	Men's Clothes	A.	3 Doors	15,000	500
20.	"	Cameras	B.	1 Door	2,000	75
21.	"	Haberdashery	B.	"	1,000	40
22.	"	Men's Clothes	D.	2 Door	4,000	170
23.	Central Suq	Jewellery	D.	1 Door	-	185
24.	"	Money Changer	A.	"	-	60
25.	"	" "	A.	"	-	65
26.	"	Pharmacy	A.	2 Doors	15,000	200
27.	"	Office	A.	3 Rooms	-	60
28.	"	Travel Agent	A.	2 Doors	-	125
29.	"	Household Goods	A.	1 Door	20,000	120
30.	Provisions Suq	Vegetables	D.	1 Stall	-	5
31.	"	"	D.	"	-	60
32.	"	Meat	D.	"	-	50
33.	"	Fish	D.	"	-	30
34.	"	Spices	D.	"	-	50

Shop No.	Location	Type of Goods Sold	Class of Property	Size of Property	Key Money K.D.	Monthly Rent K.D.
35.	Suq al-Duaij	Cloth	D.	1 Door	10,000	100
36.	"	"	D.	"	10,000	70
37.	"	"	D.	"	4,000	30
38.	"	"	D.	"	5,000	40
39.	"	"	B.	"	4,000	60
40.	"	"	B.	"	4,000	100
41.	"	Perfumes	D.	"	10,000	70
42.	"	"	D.	"	4,000	30
43.	"	Spices	D.	"	-	70
44.	"	Men's Clothing	D.	"	-	50
45.	Comm. Area 1	Cameras	A.	Shop & Office	-	225
46.	"	Toys	A.	1 Door	-	50
47.	" 2	Office	A.	"	-	50
48.	" 2	Travel Agents	A.	"	-	50
49.	" 9	Cloth	A.	Basement, Shop & Office	-	250
50.	Fahad Street	Men's Suiting	A.	1 Door	5,000	60
51.	"	"	A.	"	4,000	60
52.	"	Tailors	A.	"	10,000	80
53.	"	"	B.	"	8,000	80
54.	"	"	A.	"	4,000	150
55.	"	"	A.	"	4,000	150
56.	"	"	A.	"	12,000	75
57.	"	Haberdashery	A.	3 Doors	-	275
58.	"	"	A.	1 Door	8,000	150
59.	"	Shoes	A.	1 Door & Flat	-	300
60.	"	Travel Agents	A.	1 Door	-	250
61.	"	"	A.	2 Doors	10,000	145
62.	"	"	A.	3 Doors	-	200
63.	"	Chemists	A.	1 Door	5,000	80
64.	"	Perfumes	D.	"	-	60
65.	"	Opticians	A.	"	-	90
66.	"	"	A.	"	-	75
67.	"	Cameras etc.	A.	"	-	150
68.	"	Tape Recorders	A.	2 Doors	10,000	320
69.	"	Ladies Clothes	A.	1 Door	8,000	70
70.	"	"	A.	"	3,000	70
71.	"	Elec. Goods	A.	3 Doors	10,000	350
72.	"	China & Glass	A.	2 Doors	14,000	180
	OLD CITY					
73.	Mubarak St.	Barbers	C.	1 Door	4,000	45
74.	"	Jewellery	A.	1 Door	-	120
75.	"	Radios	A.	1 Door	-	100

Shop No.	Location	Type of Goods Sold	Class of Property	Size of Property	Key Money K.D.	Monthly Rent K.D.
	HAWALLI					
76.	Tunis Street	Furniture	A.	1 Door	-	60
76.	"	"	A.	3 Doors	-	180
77.	"	Chemists	A.	1 Door	-	60
78.	"	"	B.	"	-	20
79.	"	Sanitary Ware	B.	"	-	20
80.	Beirut Street	Furniture	B.	3 Doors	-	45
81.	"	Grocers	B.	1 Door	-	25
82.	"	Barbers	B.	"	550	15
	SALIMIYA					
83.	Main Street	Clothes	A.	2 Doors	3,000	120
84.	"	"	B.	1 Door	-	25
85.	"	"	B.	"	-	25
86.	"	Ladies Clothes	A.	"	-	120
87.	"	"	A.	"	-	57
88.	"	"	A.	3 Doors	-	360
89.	"	Haberdashery	A.	1 Door	-	90
90.	"	"	B.	"	15,000	52
91.	"	"	A.	2 Doors	-	240
92.	"	China & Glass	B.	1 Door	-	30
93.	"	Toyshop	B.	"	-	45
94.	"	Restaurant	B.	3 Doors	10,000	175
95.	"	Chemists	A.	1 Door	-	60
96.	"	Furniture	A.	4 Doors	-	200
	FAHAHIL					
97.	Main Street	Shoes	B.	2 Doors	15,000	25
98.	"	"	A.	3 Doors	20,000	100
99.	"	Laundry	C.	1 Door	300	50
100.	"	Watches	C.	1 Door	-	15

NOTES :

1) Shops are sized by their frontage which in most cases is closely related to floor area. A "door" in Kuwait (Arabic - "bab") refers to the size of window or shutter space at the front of the shop. These measures are standard throughout Kuwait.

2) Key money varies greatly because how recently the property changed hands will affect the sum paid.

3) Property was classified thus :

A : modern glass-fronted shop in good repair with modern shop fittings and display cases.

B : Usually a 1950 building; as above, but in poor state of repair.

C : Mostly converted shops, some with glass fronts, others with modern or metal shutters.

D : Shops comprising stalls, as in the suq, with wooden fronts and metal shutters - sometimes neither. These are the most "traditional" shops in Kuwait.

SOURCE : Field Survey, January to April 1968.

APPENDIX 4 :

Questionnaires in English and Arabic

used in the Survey

المقدمة

هذا المسح أو هذا الاحصاء ولا شك سيساعد كثيرا على ايجاد تخطيط جديد وافضل للمناطق التجارية والأسواق في الكويت . لذا فانكم بمشاركتكم في الاجابة على الاسئلة الواردة ادناه ستساهمون بشكل فعال في مساعدتنا لهذا الهدف .

– ان الأسئلة الموضوعة لا تتطلب ذكر اسمائكم واجوبتكم ستكون موضوع الثقة والسرية .

– والمطلوب معرفته المسافات التي تقومون بها لشراء بعض حاجاتكم ؟ ومن الهام أيضا توضيح منطقة سكناكم وعناوين المحلات الرئيسية التي غالبا تزورونها لتأمين حاجاتكم .

الأسئلة

١ – أذكر الجنسية : .....

٢ – عنوان السكن (المنطقة): .....

أ – أن تسكن الأحمدي يرجى تسمية الشارع / أو الطريق : .....

ب – وأن تسكن الكويت يرجى تسمية المحافظة والشارع وتحديد المنطقة شمالها أو جنوبها أو شرقيها أو غربيها وعلى سبيل المثال (شمالي القادسية / شرقي السالمية / جنوبي حولي) .....

جـ – فقرة خاصة بالذين لا يسكنون الكويت والأحمدي يرجى توضيح اسم القرية والشارع : .....

٣ – عادة من اين تشترى الحاجات التالية :

البقالة (المعلبات والخضار والفاكهة) الدكان ..... شارع ..... المدينة .....
الأدوات المنزلية والكهربائية : الدكان ..... شارع ..... المدينة .....
الملابس النسائية الجاهزة أو
الأقمشة لخياطتها : الدكان ..... شارع ..... المدينة .....

٤ – في الشهر الواحد تتطلب عادة عدة زيارات لهذه المحلات يرجى ذكر عددها تقريبا :

محلات البقالة : ..... مرة شهريا .
محلات الأدوات المنزلية والكهربائية الخ ..... مرة شهريا .
محلات الملابس النسائية الجاهزة والأقمشة
للتفصال ..... مرة شهريا .

٥ – من يقوم بتأمين المشتروات : هل الزوج / الزوجة / أحد اعضاء العائلة / الخادم أو الطباخ
يرجى شطب ما لا ينطبق .

٦ – نذكر لكم أدناه محلات مختلفة البضاعة وعددها أحد عشر محلا ولا شك تزورون كل هذه المحلات ولكن بعضها تتكرر زيارتكم اليها اكثر من البعض الآخر ، فيرجى بيان بالأرقام من ١ الى ١١ أمام كل منها باعتبار رقم (١) أكثر الزيارات ورقم (١١) اقل الزيارات الى هذه المحلات :

محلات الأدوات الصينية والزجاجية ..... محلات الملابس النسائية الجاهزة ...
محلات الأثاث ..... محلات الأقمشة النسائية .....
محلات الراديوات والتلفزيونات والغسالات ..... محلات البقالة .....
الخياطون ..... محلات الخضار الطازجة .....
محلات الملابس الرجالية الجاهزة ..... الملحمة .....
الأسواق المركزية (السوبرماركت) .....

٧ – بصورة عامة المحل أو الدكان قرب منزلكم تزورونه أكثر من الآخرين
عمل هذا صحيح ..... أم لا .....

٨ – هل تفضل دائما الشراء من أقرب محل لسكنك ان امكن ؟
نعم ..... أم لا .....

SHOPPING IN KUWAIT FEERUARY 1968

Notes: i) This survey may help to plan new & better shopping areas in Kuwait, so try & answer ALL the questions.

ii) The questionnaire is COMPLETELY ANONYMOUS & will be treated in confidence.

iii) We want to know HOW FAR you travel for certain goods. Your home address & those of the shops you visit are particularly important.

QUESTIONS

1. What is your NATIONALITY? .....

2. WHERE do you live? (Do NOT give P.O.box number)

a) AHMADI residents: .....Street/Road/Avenue.

b) KUWAIT CITY residents: .....Street(If possible)

.....District

Location within district... NORTH/SOUTH/EAST/WEST. (Delete as necessary)

(e.g. SOUTH Hawalli, or EAST Salimiya)

c) Others: .....Street(if possible)

.....Town or Village

NORTH/SCUTHEAST/WEST (Delete as necessary)

3. WHERE do you normally buy the following?

GROCERIES .....Shop,.....Street,.....Town.

HOUSEHOLD APPLIANCES & ELECTRIC GOODS .....Shop,.....Street,.....Town.

LADIES CLOTHES or CLOTH for CLOTHES .....Shop,.....Street,.....Town.

4. HOW MANY TIMES would you normally visit these shops in a month (say)?

GROCERIES: .....Total visits in a month.

HOUSEHOLD APPLIANCES & ELEC.GOODS: .....Total visits in a month.

LADIES CLOTHES or CLOTH FOR CLOTHES:.....Total visits in a month.

5. WHO does most of your shopping? HUSBAND/WIFE/WHOLE FAMILY/BOY or COOK.

6. 11 kinds of shop appear below. You visit some more often than others. Can you number them 1-11 according to the number of times you visit them over a period? Place "1" beside the one you visit most & continue until you reach "11" - the one you visit least.

CHINA & GLASS.....	MEN'S CLOTHES.....	GROCERS.....
FURNITURE.....	WOMEN'S CLOTHES.....	GREENGROCERS.....
RADIO & TV.....	CLOTH FOR WOMEN'S CLOTHES.....	BUTCHERS.....
TAILORS.....		SUPERMARKET.....

7. Generally, do you visit shops nearer to your home more often than those further away? YES / NO.

8. Would you prefer to shop nearer at home if possible? YES / NO.

REFERENCES

This section is divided into two parts : A, Statistical material published in Kuwait; and B, other references. It is hoped that the collecting together of source material published in Kuwait (mostly in Arabic) will provide some assistance for other workers. A knowledge of Arabic is essential since very little statistical material appears in any other language.

A. STATISTICAL MATERIAL PUBLISHED IN KUWAIT

Annual Statistical Abstracts (1964-1967). Planning Board, Kuwait. (An English translation of these Abstracts is available some time after the publication of the Arabic original.

Monthly Statistical Bulletins (1965 - in progress). Planning Board, Kuwait. (English and Arabic).

Census of Population (1957). Ministry of Social Affairs. Arabic.

Census of Population (1961). Ministry of Social Affairs and Labour. Arabic.

Census of Population (1965). Statistical Section, Planning Board. Arabic. First published 1967. Revised edition 1968.

Census of Establishments (1965). Statistical Section, Planning Board, Arabic. 5 vols.

Census of Government Employees (1966). Statistical Section, Planning Board. Arabic. 3 vols.

Chamber of Commerce (1964). Directory of Kuwait.

Arabic.

Currency Board Reports (1967 - in progress).

Family Budget Survey (1968). Statistical Section, Planning Board.

Arabic.

Ministry of Finance and Oil (1965). The Oil of Kuwait : Facts and Figures. English.

Ministry of Guidance & Information (1963). Kuwait Today.

English. Nairobi.

Ministry of Health, Statistical Section (1957 - in progress).

Annual Reports. Arabic.

Ministry of Guidance and Information (1964 - in progress).

Arabic. Daily Gazette.

Planning Board (1963 - in progress). Kuwait - Economic Survey.

English.

Municipality of Kuwait (1964 - in progress). Annual Reports

Arabic.

Municipality of Kuwait. N.D. An outline of the Municipality's History. Duplicated. Arabic.

Municipality of Kuwait. 1963. Reports of Dr. H. Taisy, 1960-1962.

Duplicated. Arabic.

B. OTHER REFERENCES

Abu Hakima, A. (1964). The Rise and development of Kuwait and Bahrain. Beirut.

Abu-Lughod, J. (1960). Migrant adjustment to city life - the Egyptian villager in Cairo in New Metropolis in the Arab world. Cairo.

Abu-Lughod, J. (1961). Migrant adjustment to city life : the Egyptian Case. American Journal of Sociology, Vol.67.

Adams, McC. R. (1965). Land behind Baghdad. Chicago.

Aitchinson, C.U. (1933). Collection of Treaties. London.

Al-Duaij (1962). Pre-oil Kuwait. Undergraduate dissertation, Department of History, Keele University.

Alexander, A.E. (1948). Pearl Fishing in the Persian Gulf. Gems and Gemology, Vol.6, no.2.

Alexandersson, G. (1956). The Industrial Structure of American Cities. Lincoln, Nebraska.

Auerbach, F. (1913). Das Gesetz der Bevolkerungskonzentration. Petermann's Mitteilungen, Vol.59.

Azeez, M. (1968). Geographical aspects of rural migration from Amara Province, Iraq. Ph.D. Thesis, University of Durham.

Azzam, O., C. Buchanan & J. P. Thysse (1965). Policies to be Adopted in the Preparation of a Master Plan for Greater Kuwait. Municipality of Kuwait. (Duplicated).

Banerji, B.N. (1931). Meteorology of the Persian Gulf and Mekran. Calcutta.

Barclay, G.W. (1964). Techniques of Population Analysis. New York.

Belgrave, C. (1966). The Pirate Coast, London.

Berreby, J.J. (1959). Le Golfe Persique. Bibliotheque Historique, Paris.

Berry, B.J.L. (1961). City size distributions and economic development. Economic Development and Cultural Change, Vol.9.

Berry, B.J.L., J.W. Simmons & R. J. Tennant (1963). Urban population densities : structure and change. Geographical Review, Vol.53.

Berry, B.J.L. (1967). Geography of Market Centers and Retail Distribution. New York.

Berry B.J.L. & A. Pred. (1965). Central Place Studies : A bibliography of theory and applications. Regional Science Research Institute, Bibliographic Series, 1.

Blegrad, H. & B. Loppenthin (1944). Fishes of the Iranian Gulf. Copenhagen.

Boeke, J.H. (1953). Economics and Economic Policy of Dual Societies. New York.

Bopegamage, A. (1957). Delhi ' - A study in urban sociology : Bombay.

Bowen, R. le B. (1951). Pearl Fisheries of the Persian Gulf. Middle East Journal, Vol.5. No.2.

Bowen-Jones, H. (1968). Primary stage development in the Persian Gulf. Unpublished paper given at British Association, Dundee.

Bowen-Jones, H. et al. (1968). Survey of soils and agricultural potential in the Trucial States : Reconnaisance Survey 1966-1967. University of Durham.

Brandenburg, D. (1967). Astrology, Astronomy, & Medicine : on Ancient Islamic Medicine. Munchen Medische Wirtschaft. Vol. 109, May.

Breese, G. (1966). Urbanization in newly developing countries. Englewood Cliffs, N.J.

British Bank of the Middle East, Annual Report 1954.

Brush, J.E. (1962). The Morphology of Indian Cities, in, India's Urban Future. Ed. by R. Turner, California Univ.

Burgess, E.W. (1925). in : R.E. Park, E.W. Burgess & R.D. McKenzie, The City. Chicago.

Calverley, E.T. (1950). The American Arabian Mission in Kuwait. Journal of the American Medical Women's Association, August.

Calverley, E.T. (1958). My Arabian days and nights. New York.

Churchill, C.W. (1954). City of Beirut. Dar al-Kutub, Beirut.

Cipolla, C. (1962). The Economic History of World Population.

Clark, C. (1951). Urban population densities. Journal of the Royal Statistical Society : Abstracts., Vol.114.

Clarke,J.I. (1960). Persons per room & an index of population density. Tijdschrift voor economische en sociale geografie, Vol.51.

Clarke,J.I. (1965). Population Geography, London.

Clarke, J.I. & B.D. Clark (1969). Kermanshah - An Indian Provincial City. University of Durham.

Candolle, de, E.A.V. (1958). Development in Kuwait. Journal of the Royal Central Asian Society, Vol.46.

Coale, A.J. & P. Demeny (1966). Regional Model Life Tables and Stable Populations.

Colby, C.C. (1933). Centrifugal and Centipetal Forces in Urban Geography. Annals of the Association of American Geographers. Vol.23.

Davis, K. (1969). World Urbanization 1950 - 1970. Volume I : Basic data for cities, countries and regions. Univ. of California

Davis, K. & H. Hertz (1967). Patterns of World Urbanization (never published).

Dickson, H.R.P. (1956). Kuwait and her neighbours. London.

Dickson, V. (1955). The wild flowers of Kuwait and Bahrain, London.

Duncan, O.D. (1957). The measurement of population distribution. Population Studies, Vol.11.

Ffrench, G.E. (1966). Community Health in Ahmadi. Kuwait Oil Company Ltd., Kuwait.

Ffrench, G.E. (1968). Medicine and Geography. Unpublished paper given to Kuwait Medical Society, April.

Ffrench, G.E. & Y. Snaker (1963). Infantile Gastro-enteritis in Kuwait. Paper given at 13th Regional meeting of W.H.O., Kuwait.

Firey, W. (1947). Land Use in central Boston. Harvard.

Fisher, W.B. (1961). The Middle East. London.

Fisher, W.B. (1966). The Middle East and North Africa. Europa Publications.

Fraser, L. (1911). India under Curzon and After. London.

Freedman, R. & A.L. Adlakha (1968). Recent fertility declines in Hong Kong. Population Studies, Vol.22, No.2.

Freeth, Z. (1956). Kuwait was my home. London.

Fruchter, B. (1954). Introduction to factor analysis.

Ginsburg, N.S. (1961). Atlas of Economic Development Chicago.

Ginsburg, N.S. (1965). in The Study of Urbanization, Edited by P.M. Hauser & L.F. Schnore.

Gist, N.P. (1958). The ecological structure of an Asian city : An East-West comparison. Population Review, January.

Glob, P.V. (1956). Reconnaissance in Qatar. Kuml, pp.199-220.

Glob, P.V. (1957). Prehistoric discoveries in Qatar. Kuml. pp.167-178.

Glob, P.V. (1959). Archaeological investigations in four Arab States. Kuml, pp.233-239.

Glob, P.V. (1960). Danish archaeologists in the Persian Gulf. Kuml, pp.208-213.

Glob, P.V. & T.G. Bibby (1960). A forgotten civilisation of the Persian Gulf. Scientific American. Vol.203. October.

Gottman, J. (1961). Megalopolis,

Gunawardena, K.A. (1964). Service centres in South Ceylon. University of Cambridge. Ph.D. Thesis.

Gras, N.S.B. (1922). Introduction to economic history. New York.

Gregory, S. (1964). Statistical methods and the geographer.

Gulick, J. (1967). Tripoli - a modern Arab city. Harvard.

Haggett, P. (1965). Locational analysis in human geography.

Harris, C.D. (1943). A functional classification of cities in the United States. Geographical Review, Vol.133. January.

Harris, C.D. & E.L. Ullman (1945). in : Readings in Urban Geography. Edited by H.M. Mayer & C.F. Kohn. Chicago.

Harrison, R.S. (1967). Migrants in the City of Tripoli, Geographical Review, Vol.57.

Hartley, R. (1968). Recent Population Changes in Libya : Economic relationships and geographic patterns. Ph.D. Thesis, University of Durham.

Hauser, P.M. (1965). in : The Study of Urbanization. Edited by P.M. Hauser & L.F. Schnore (1965). New Yotk.

Hauser, P.M. & L.F. Schnore (1965). The Study of Urbanization. New York.

Hawkes, J. & L. Wooley (1963). History of Mankind : Vol.I. Prehistory and the Beginnings of Civilization. London.

Hewins, R. (1963). A golden dream (The Miracle of Kuwait).

H.M.S.O. (1963). Weather in the Mediterranean.

Hoselitz, B.F. (1955). The city, the factory and economic growth. American Economic Review, May.

Hoyt, H. (1936). in : According to Hoyt., Washington.

Hoyt, H. (1950). in : According to Hoyt., Washington.

Hoyt, H. (1964). Recent distortions of the classical models of urban structure. Land Economics, Vol.40.

Hoyt, H. (1966). According to Hoyt., Washington.

Imbrie, J. (1963). Factor and vector analysis programs for analysing geologic data. Office of Naval Research, Technical Report No.6.

International Bank for Reconstruction and Development (1965). The economic development of Kuwait. Baltimore.

International Labour Office (1960). Why labour leaves the Land. Geneva.

Imperial Bank of Iran, Annual Reports. 1949 and 1951.

Jones, E. (1966). Towns and cities. Oxford.

Jones, F.L. (1968). Social area analysis : some theoretical and methodological comments illustrated with Australian data. British Journal of Sociology, Vol.19, 4, December.

Jones, V. et al. (1963). Economic and social classification of metropolitan areas. The Municipal Year Book.

Jordan, Dept, of Statistics (1964). First Census of Population, Final Tables. Vol.1.

Kamerschen, D. (1968). Further analysis of over-urbanization. Economic Development and Cultural Change, Vol.17, No.2.

Kanter (1967). Libya - A geo-medical monograph. Springer-Verlag. Heidleburg.

Klovan, J.E. (1966). Q-mode factor analysis program in Fortran IV for small computers. Department of Geology, University of Calgary.

Kumar, R. (1965). India and the Persian Gulf Region 1858-1907.

Lampard, E. (1955). The history of cities in the economically advanced areas. Economic Development and Cultural Change. Vol.3, No.2, January.

Landen, R.G. (1967). Oman since 1856. Princeton, New Jersey.

Levey, M. (1966). Medical deontology in Islam. Journal of the History of Medicine V.21, October.

Lockhart, L. (1960). Persian cities.

Lorimer, J.G. Gazateer of the Persian Gulf : Vol.1. Historical (1915), Vol.2. Geographical and Statistical (1908) Calcutta.

Lubell, H. (1963). Middle East Oil Crises and Western Europe's Energy Supplies. Baltimore.

McGee, T.G. (1967). The South East Asian City.

Mabogunje, A.L. (1968). Urbanization in Nigeria.

Mayer, H.M. & C.F. Kohn (1963). Readings in Urban Geography. Chicago.

Meier, G.M. & R.E. Baldwin (1964). Economic Development. New York.

Milton, D.I. (1963). Geology of the Arabian Peninsula, Kuwait, Geological Survey Professional Paper 560 F.

Moser, C.A. & W. Scott (1961). British Towns. Edinburgh.

Motwani, K. (1951). The impact of modern technology on the social structures of South Asia. International Social Science Bulletin Vol.3.

Mountjoy, A.B. (1963). Industrialization and under-developed countries.

Moyse,Bartlett, H. (1966). The pirates of Trucial Oman

Muller, J.H. (1963). Koweit : Cadillac and Coca Cola. Paris.

Murphy, R.E. (1966). The American City. New York.

Murphy, R.E. & J.E. Vance (1954). Delimiting the C.B.D. Economic Geography Vol.30.

Nelson, H.J. (1955). A service classification of American Cities. Economic Geography, vol.31.

Niebuhr, C. (1774). Description de L'Arabie. Amsterdam.

Norburg, K. (1962). The I.G.U. Symposium in Urban Geography. Lund, Sweden.

Palgrave, W.G. (1868). Eastern and Central Arabia, Vols. 1 and 2.

Rodwin, L. (1950). The theory of residential growth and structure. Appraisal Journal Vol.18.

Russett, B.M. et al. (1967). World handbook of political and social indicators. Yale.

Salem, S.N. (1966). Neurological complications of heat stroke in Kuwait. Annals of Tropical Medicine and Parasitology, Vol.60. No.4.

Schnore, L.F. (1961). The statistical measurement of urbanization and economic development. Land Economics Vol.37, No.3.

Sen, S.N. (1960). The city of Calcutta, A socio-economic survey 1954-5 - 1957-8. Calcutta.

Shamma, S. (1959). The oil of Kuwait. Middle East Research & Publishing Centre, Beirut.

Shiber, S.G. (1964). The Kuwait Urbanization. Kuwait.

Singh, R.L. (1955). Banaras - A study in urban geography. Banaras.

Sjoberg, G. (1960). The Preindustrial City - past and present. Illinois.

Smith, T.V. & L.D. White (1929). Chicago : An experiment in social science research. Chicago.

Sovani, N.V. (1964). The analysis of over-urbanization. Economic development and cultural change, Vol.12, No.2, January.

Stewart, C.T. Jr. (1958). The size and spacing of cities. Geographical Review. Vol.48.

Stocqueler, J.H. (1832). Fifteen months pilgrimage through untrodden tracts of Khuzistan and Persia. London.

Strong, C.S. (1940). Pearl diving in the Persian Gulf. Travel Vol.75. No.5. September.

Tidsdale, H. (1942). The process of urbanization. Social Forces, March.

Trewartha, G.T. (1962). The earth's problem climates.

Tryon, R.C. (1955). Identification of Social areas by cluster analysis. University of California.

Turner, R. (Ed. (1962). India's urban future. California.

U.K. Board of Trade (1963). Report on the Census of Distribution of 1961. H.M.S.O.

U.K. Ministry of Labour (1965). Family Expenditure Survey, H.M.S.O.

U.N. (1955). Social Implications of Urbanization in Africa south of the Sahara. Tensions and Technology Series., Paris.

UN/UNESCO (1957). Urbanization in Asia and the Far East. Calcutta.

U.N. Demographic Yearbooks (1965, 1962, and 1966). New York.

Villiers, A. (1958). The Sons of Sinbad. London.

Wegner, L.W. (1958). The Arab Principalities of Eastern Arabia. Unpublished thesis. American University of Beirut.

Witson, A.T. (1959). The Persian Gulf, London.

Zipf, G.K. (1949). Human behaviour and the principle of least effort. Cambridge, Mass.